

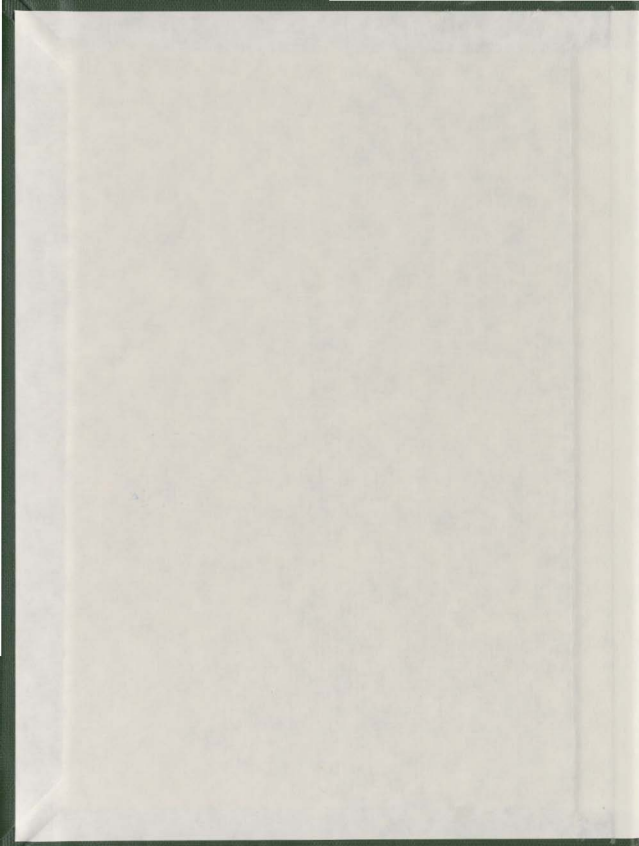
THE USE OF WILDERNESS CAMPING AS A DROPOUT
PREVENTION STRATEGY.

CENTRE FOR NEWFOUNDLAND STUDIES

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THE USE OF WILDERNESS CAMPING AS A
DROPOUT PREVENTION STRATEGY



by
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A Thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Education

Department of Educational Psychology
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Fall 1983

St. John's

Newfoundland

ABSTRACT

This paper embodies the first two phases of a longitudinal study that the Terra Nova Integrated School Board has initiated to measure the efficacy of wilderness camping as a device to reduce student dropout rates. These first two phases were: (1) develop a model to identify potential high school dropouts, and (2) devise a wilderness camping program to reverse the process of these students' inevitable withdrawal from school. The third phase will be to monitor the effectiveness of the screening procedure and the effectiveness of the camping program as a dropout reduction device.

A model to identify potential dropouts was developed by studying the literature on dropout students to find a commonality of recurring factors that cause a student to drop out of school. The most salient ones identified and used in this study were:

1. Extracurricular activities
2. Days absent
3. Grades failed
4. English grade point average
5. Mathematics grade point average
6. Science grade point average
7. Reading achievement

Male grade nine and ten students from Glovertown Regional High, Glovertown and Gander Collegiate, Gander were chosen for this study. Their English, Mathematics, and Science teachers were given a questionnaire to nominate up to five students who had the worst performance on those variables associated with dropping out of school. Forty-seven students were judged to be potential dropouts. Of these, through the process of stratified random sampling, six from each of the two schools were randomly selected and assigned to an experimental group. The same procedure was used to determine the control group.

To test the discriminating power of the model, the 47 potential dropout students were compared to 57 randomly selected, male, grade nine and ten students on all seven variables. Also, the experimental group was compared to the control group on the same seven variables. The data analyses indicated that the potential dropout students were significantly different from the random sample students on all seven variables, and that there was no significant difference between the experimental and control groups on any of the seven variables:

The dropout prevention program departed from conventional approaches. It consisted of taking 12 potential dropouts on an eight day wilderness camping expedition to Terra Nova National Park, Newfoundland. They were accompanied by three school counsellors who attempted to reduce

the dropout proneness of the campers by combining the uniqueness of the natural setting with routine camp activities, physical challenges, communal living experiences, and counselling techniques based on Adlerian psychology and Reality Therapy.

The effectiveness of both the model and the camping expedition will be measured at the end of three years. In addition, the study will be replicated for a minimum of three more years. This will increase the sample size and the validity of the evaluation of the program.

ACKNOWLEDGEMENTS

This research could not have been made possible if it were not for the efforts of many people. The most prominent sources of support came from:

1. Bryan Hartmann, my advisor, who displayed a successful combination of academic expertise, patience, encouragement and friendship.

2. My colleagues, Wayne Chaulk and Terry Hollett, who not only assisted with the logistics of the camping expedition, but also were invaluable members of the camping group.

3. The twelve students at camp who helped renew my faith in adolescent students and confirmed my desire to continue trying to help students with problems.

4. Terra Nova Integrated School Board for underwriting the cost of the camping expedition, giving permission for students to be away from school, and granting me an educational leave to study the feasibility of wilderness camping as a dropout prevention program.

5. Officials of Terra Nova National Park for assisting wherever possible.

6. My late aunt Hettie Paul, with whom I lived for several years. Her optimism and unshakable faith in me, especially during my career as a school dropout, has left

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an indelible impression with me.

7. My wife, Shirley, and children, Natalie and Gregory, who tolerated my many absences from family activities. Hopefully, things will now begin to return to normal.

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CHAPTER 1

INTRODUCTION

The phenomenon of dropping out of school has been of interest to social scientists since the beginning of the twentieth century. More recently the scope of the studies has been broadened and the types of designs have become more sophisticated. School dropouts have been studied by sociological researchers, but educational researchers have conducted most of the published research. The range of research effort suggests the problem is an important one. It appears that the dropout, as an individual, has generated the most research in the field of education.

Researchers agree that there are many explanations why students drop out of school and most of these explanations are of a multifaceted nature. These factors involve an interplay of such forces as the dropout's personality, socioeconomic background, and school performance, as well as the tenor of the times. Typically, a dropout has repeated one or more grades, has a history of poor academic achievement, is a poor reader, does not participate in extracurricular activities, and comes from a family that has a low level of education and a low socioeconomic status level. A potential dropout also exhibits these characteristics but is different only in the fact that he has not yet dropped out of school.

Dropout studies have been conducted before in Newfoundland (Duncan, 1973; Gillespie, 1978; Kennedy, 1966; Martin, 1963; Stack, 1977). Like most of the national and international studies, they have typically analyzed the factors that caused the dropout behavior, compared dropouts to persisters, and/or delineated the characteristics of potential dropouts. Duncan (1973) and Stack (1973) attempted to identify potential dropouts, but did not attempt to devise or institute a preventive program. This study attempted to develop and examine the effectiveness of a dropout prevention program. The program employed group and individual counselling techniques during a wilderness camping experience to reduce dropout proneness in 12, male, grade nine and ten students.

Purpose of the Study

The purpose of this study was twofold and consisted of two steps. Initially, it involved the development of a model which could be used for the identification of potential, male, high school dropouts in Gander Collegiate, Gander, and Glovertown Regional High School, Glovertown. Once the indices that showed a high predictability of dropping out had been delineated, preventive action was taken in the form of a group guidance program. The objective of this program was to reduce the dropout proneness of 12 potential dropout students during an eight day, wilderness, camping expedition to Terra Nova National Park and its adjacent territory. The

students were accompanied by three school counsellors. During that time, utilizing the uniqueness of the setting, different counselling techniques, and the communal living experiences, an attempt was made to halt the process of their premature withdrawal from school.

Significance of the Study

Depending upon the various operational definitions used by researchers, the dropout rate for Newfoundland has been computed to be between 33 percent and 38 percent (French, Bishop & Piercey, 1981).

Since its inception in 1969, the Terra Nova Integrated School Board has been concerned with the holding power of the schools under its jurisdiction. Interest has been heightened recently due to a serious decline in student enrolment. This interest can be attributed basically to the following three factors:

1. A decrease in the natural birth rate throughout the school district.
2. A decrease in the population of the school district due to a shortage of employment opportunities.
3. A finding of a recent task force on education in Newfoundland. Crocker and Riggs (1979) predicted that with the reorganization of the secondary school curriculum, an additional 12 percent of students across Newfoundland will

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withdraw from school before completion of their school program.

There is little influence that the Board can realistically exert over the first two cited causes of declining enrolment. However, in the third case it can exercise some control on the rate of retention. The early identification of potential school dropouts followed by the establishment of some preventive measures should reduce the Board's dropout rate.

Ironically, this renewed concern about dropouts appears at a time when the schools' physical facilities and equipment are vastly improved, teachers' professional qualifications have improved, and the school programs and types of instruction have become more diversified.

Several Newfoundland school boards such as Cape Freels Integrated, St. Barbe South Integrated, and Exploits Valley Integrated have recently conducted formal studies of the dropout situation within their districts. Presumably, these investigations were precipitated by the fiscal constraints which necessitate a more accurate determination of enrolment to facilitate sounder economic planning and policy making. These studies did not state whether or not they were for the purpose of defining the parameters of the dropout problem within their respective districts in order to initiate preventive action. Coincidentally, and perhaps significantly, these surveys came in the wake of the Crocker and Riggs (1979) task force report.

Many studies of school dropouts have been conducted over the past years. They are characterized by their reference to the tremendous waste of human resources that can be measured in personal, educational, social and economic losses. Another predominant theme that appears in the literature on school dropouts is that school personnel are exhorted to do something about the problem. Too often these studies have stopped short of recommending a prescriptive type of action or program to reduce the rate of dropping out. It is not enough to describe the characteristics of dropouts, the reasons for dropping out, the personal, social and economic ramifications of the problem. What is necessary is mobilization of the available resources at the schools' disposal to at least attempt to ameliorate the dropout situation.

The program developed from this study can be termed interventionist rather than developmental. Dropout behavior is regarded as a process rather than a specific event. Rather than dealing with the problem from its initiation when prevention is most effective, this program was concerned with reacting to the dropout problem and intervening at a point near the end of a dropping-out-process that had its antecedents further back in the students' school histories. It was a temporary measure designed to "make the best of a bad situation" until a more appropriate and ongoing dropout prevention program could be instituted in the earlier school grades.

Background to the Study

The Terra Nova Integrated School Board is not unique in representing a mosaic of students from different communities, socioeconomic backgrounds, religions, and levels of achievement and ability. For the majority of the students, the various schools are able to make a significant contribution to the overall development of the student through a variety of educational programs and school personnel. However, for a percentage of students the schools have provided very few positive benefits.

Due to the nature of their deviant behavior, some students are labeled "problem students". The "problem student" represents a variety of behaviors that range from withdrawal to defiance. This range includes students who are truant, disruptive, asocial, and underachieving. The label frequently initiates a vicious circle of behaviors that often culminates in a self-fulfilling prophecy. It just becomes a matter of time before many of these "problem students" exercise the most viable option available to them--withdrawal from school. This course of action is often an ego-saving device. It effectively gets them out of a stressful situation.

One of the consistent findings of research on dropouts is that the reasons why a student chooses to drop out are complex and contingent upon a variety of interdependent factors that all interact within the social and physical milieu of the potential dropout. "The act of dropping out is an individual action but is only a symptom of many under-

lying factors" (Greene, 1966, p. 10). That statement typifies the opinion of many researchers of the topic. These factors, then, have educational, social, political, economic and legal sources.

While student dropouts should be a concern of all school personnel, the task of implementing a viable program to prevent students from dropping out of school should befall the guidance counsellor. By their very nature, guidance services permeate the whole school program.

The objectives of the dignity and worth of the individual and the importance of individual differences, and the opportunity for each student to develop according to his potential are important considerations which undergird the entire guidance program. (Greene, 1966, p. 74)

School dropout reports and surveys single out the importance of guidance in dealing with the dropout problem. Lack of guidance and counselling has often contributed to the severity of the problem. It is generally agreed by researchers that more and better guidance services will increase the holding power of schools (Greene, 1966; Kaplan, 1964; Morris, 1982; Schreiber & Kaplan, 1964).

It is acknowledged that in order for any guidance program to be effective, especially in reducing the number of school dropouts, it must be developmental and it must be for all students. Guidance intervention at the high school level is only partially effective. While it offers temporary relief, it comes too late. This observation should not suggest that nothing should be done until a program of

dropout prevention has been inaugurated back in primary school and the cumulative benefits have reached into high school. There is no reason why an interventionist program cannot be instituted conjointly with a developmental program, the former staying in place until the latter reaches fruition.

For the counsellor, especially, the heart of the dropout problem is not simply that so many sink but that so many never learn to swim. (Schreiber & Kaplan, 1964, p. 16)

The impetus for this study was generated by personal observations and concern as a former teacher and guidance counsellor employed by the Terra Nova Integrated School Board. There was a long-standing realization that in at least the three high schools in the district where the writer worked there was no concerted program to help potential dropouts stay in school. It was apparent that conventional methods of dealing with potential dropouts, such as work-study programs, were not always effective. For some of these students, school was nothing but a "drag" that often served only to accentuate and mirror their failures, frustrations, and shortcomings. Viewed by potential dropouts as extensions of the school establishment, school personnel often become the object and target of potential dropouts' displaced aggression.

It was starkly apparent that not only the school, but also the potential dropouts' total environment was contributing to their school behavior. It was reasoned that for any effective counselling to occur, the logical place to do it

would be in a setting that was divorced from the sources of their discontent; that is, their school, community, and/or family. It was further reasoned that a wilderness area might be the best setting that separated potential dropouts from the sources of their academic discontent. It is generally acknowledged that an ordinary camping experience provides therapeutic benefits for most people. Based on that fact plus the writer's familiarity with the success of Outward Bound Schools, the idea of a wilderness camping expedition for potential dropouts was conceptualized. It was hypothesized that by making this camping expedition rugged and challenging, like that of the Outward Bound Schools, success might be achieved in reducing the dropout rate.

The miracle and uniqueness of wilderness camping lies precisely in the fact that it offers a learning situation which is life and not a game that simulates it. (Köepke, 1974, p. 9)

A forerunner to the expedition under study was conducted to determine the feasibility of wilderness camping trips. It took place at Gros Morne National Park in September, 1980, and consisted of nine, male, high school students, the writer, and two colleagues. The results proved encouraging enough to try again, but this time using a more systematic approach.

The Outward Bound Movement

Many of the wilderness camps in existence have been influenced by the Outward Bound schools. Predictably, much of the research that describes the therapeutic benefits of wilderness camping has been generated by studying the Outward Bound schools and their models. To put the remainder of this chapter in context, it is necessary to acquaint the reader with an overview of the Outward Bound movement.

Outward Bound schools are the manifestations of Kurt Hahn's educational philosophy, "that the worlds of thought and action should be incorporated into a unified curriculum" (Guenther, 1976, p. 2). Up to 1933, he ran a private school, Salem, in Germany, but later fled to Britain to avoid Nazi persecution of the Jews. In 1934 he established a school, Gordonstoun, in Scotland. This school integrated physical hardships, community service, manual training and academic preparation. He lobbied government and industrialists for a network of schools like Gordonstoun. His evangelism received no significant response until Lawrence Holt, owner of the Blue Funnel Shipping Line, became concerned about the high number of fatalities among young seamen when his ships were torpedoed. Older, more experienced seamen, who were able to survive, insisted that the young men were dying from a lack of will to survive. Holt became a believer of Hahn's educational theories and financed the first Outward Bound school in Aberdovey, Wales, in 1941. This school incorporated the philosophy of the Gordonstoun School; but also,

it was designed to teach students how to survive under stress by relying on their inner strength, courage, and ingenuity.

The school's success led to a popular demand for its continuance after World War II ended. The Outward Bound movement now has 32 schools operating on five different continents (Kaplan, 1979).

The Outward Bound program is based on the concept of self-discovery as well as the educational experiences that accrue from this discovery. Learning is acquired through the combined use of the setting, the group, the instructors and the self. Students are given a series of challenging physical and social problems to solve. The physical challenges include back-packing, sailing, rapelling, and white-water canoeing. Social challenges stem from the need for cooperation within the groups (patrols) and leadership.

All Outward Bound schools employ the same basic curriculum design. Variations in the basic course occur because different environments necessitate different approaches. The standard course is from 21 to 28 days in duration, and it consists of seven phases: (1) a skills training period (equipment use, first aid instruction, food preparation, and shelter construction); (2) a series of short expeditions; (3) physical challenges like rock climbing; (4) a solo (three days of solitude with a minimum of equipment); (5) a seven mile marathon; (6) a one-day community service project; and (7) a group expedition without an instructor.

The whole program is designed to affect the participant as an individual, as a member of a group, and as a member of the community. It is based on action rather than words, and is task oriented. Through situations of contrived stress, both male and female participants are challenged to develop physical and psychological persistence to push themselves to their limit of pain and exhaustion (Guenther, 1976). Feedback is concrete and immediate. Outward Bound places the participant in a peer group that provides positive peer support. The dynamics of a small group parallel those of society. If they can learn to function effectively in a small group, they will have a greater chance to do so within the larger framework of society.

Research Questions

The nature of this research dictated that answers to the research questions could only be obtained from a longitudinal study. Time constraints created by the writer's educational leave permitted only an analysis of data that yielded answers to some short term questions that tested the viability of a dropout prediction model. The long term questions will be answered later by the writer to determine if wilderness camping was effective in reducing the dropout rate.

Forty-seven students who were nominated as potential dropouts were compared to 57 students randomly selected from

the student population to determine if they were significantly different. In addition, three groups of potential dropouts were compared to determine if they were similar. The various groups were compared on the following seven variables associated with school dropouts: (1) extra-curricular activities, (2) days absent, (3) grades failed, (4) English grade point average, (5) Mathematics grade point average, (6) Science grade point average, and (7) reading achievement. Using these seven variables, the various groups were compared to answer the following long- and short-term questions:

Short Term Questions

1. Did the 47 grade nine and ten male students nominated as potential dropouts differ significantly from a random sample of 57 students drawn from the same student population?
2. Was there a significant difference between the three groups of potential dropouts?

Long Term Questions

1. Did more members of the control group drop out of school than did members of the experimental group?
2. Did members of the experimental group repeat fewer grades than did members of the control group?

3. Did members of the experimental group participate in more extracurricular activities than did members of the control group?

4. Did members of the experimental group have a better school attendance record than did members of the control group?

5. Did members of the experimental group attain a higher grade point average in English than did members of the control group?

6. Did members of the experimental group attain a higher grade point average in Mathematics than did members of the control group?

7. Did members of the experimental group attain a higher grade point average in Science than did members of the control group?

8. Did members of the experimental group attain a higher reading level than did members of the control group?

CHAPTER 2

REVIEW OF THE RELATED LITERATURE

One of the essential components of Canadian life is the basic right that public education be made available to all people. It is an extension of a democratic ideal that universal education will improve the general quality of life of a country's citizenry. The provision of public education coincided with the emergence of industrialization. From that development came the realization that employment and social mobility were dependent upon formal education. Formal education, then, was perceived as the vehicle that transcended social classes and led to the fulfillment of the ideal that anybody could "reach the top", regardless of origin.

Coincidental with the introduction of public education was the phenomenon of dropping out of school. Almost immediately social scientists began to investigate this type of behavior. Green (1966) credited E. L. Thorndike with having conducted the first scientific study of school dropouts in North America. In 1900 Thorndike found that the dropout rate for 23 selected American cities was 81.7 percent. Since then a large number of studies have been generated which have resulted in the dropout being "one of the most widely researched individuals in the field of education" (Gillespie, 1979, p. 10).

While there has been much research conducted on dropouts,

there is little research that has described dropout prevention programs. The research on dropout prevention indicates that the major emphasis has been placed on individualizing the curriculum, implementing work-study programs, and/or introducing vocational courses. There is little research on the use of wilderness camping as a means of preventing school dropouts.

This chapter reviews the literature that is related to this study. The chapter is divided into three distinct sections. First, it reviews studies that describe the phenomenon of dropping out of school, especially as it relates to the identification of potential dropouts. Second, it reviews studies of dropout prevention programs and serves as a transition to the third section. The third section reviews the literature on the therapeutic benefits of camping and its feasibility as a programmatic approach to reducing the dropout rate.

A limiting factor of this literature review is that most of the research has been conducted in the United States, and, to a lesser extent, other parts of Canada. Nevertheless, the political, economic, and cultural similarities of Canada and the United States suggest that many of the results can be generalized to comparable Canadian settings.

Varner (1967) has succinctly organized the literature on dropouts into the following six questions:

1. How many pupils drop out of school?
2. Who are the dropouts and what are they like?

3. What happens to dropouts?
4. What are the reasons for dropping out of school?
5. Which pupils will drop out?
6. What ways and means can be developed to reduce dropout rates?

The review of literature on school dropouts for this study was primarily concerned with Varner's final three questions.

Causes of School Dropouts

Early researchers of school dropouts tried to find the "cause" of students dropping out of school. In the late 1930's this orientation changed when the authors of several studies became cognizant of the fact that dropping out was not caused by a single factor, but resulted from the interplay of a multiplicity of factors (Douglass & Wind, 1937; Richman, 1939; Samler, 1938). Paradoxically, these multiple factors were both intrinsic and extrinsic to the school, the individual, and the individual's socioeconomic background. Duncan (1973) pointed out that recent research has departed from emphasizing generalities and has begun to identify specific factors in the individual's background and makeup. A statement by Young and Reich (1974) is typical of many researchers of school dropouts:

Most students drop out in response to forces external to as well as internal to the school. School is truly a part of a larger society, and must be viewed within that framework. (p. 5)

Hohol (1955) contended that early school leaving was "concerned with a multiplicity of factors operating in a 'Cluster'" (p. 11). Kennedy (1966) pointed out that there was no single cause and effect relationship in dropping out. Instead, it involved "many selective factors" (p. 9). More recently, Levens (1970) and Young and Reich (1974) postulated that dropping out was accompanied by a constellation of personal and social factors. On the basis of the presence or absence of these factors, dropout proneness was identified.

In an attempt to clarify the relationship between this constellation of variables and the act of dropping out of school, Gillespie (1979) added a psychological dimension, the concept of alienation. While it is true that a combination of many disruptive forces are acting upon a potential dropout, it is "the feeling of alienation ... that results ultimately in withdrawal from school. It constitutes the common link among the dropout population" (p. 40). Young and Reich (1974) also viewed dropout behavior as a manifestation of alienation.

These studies attest to the agreement among recent writers on the dropout phenomenon that there is neither a single reason nor a single source of influence that induces students to prematurely withdraw from school. It is the result of a combination of many forces that impinge upon the individual student and increase in complexity as they interact with each other in different ways over time. These interactions make the problem an exceedingly complex one.

Another source of agreement among researchers is the position put forward first by Van Dyke and Hoyt (1958) and later by others (Bachman, 1972; Bristow, 1964; Hilton, 1973); that dropping out is a process that has its antecedents further back from the time the student elects to drop out of school.

Identification of Potential Dropouts

All of the disruptive forces that caused a student to drop out of school also impinge upon the potential dropout. The only essential difference between the dropout and the potential dropout is that the former has withdrawn from school, whereas the latter has not yet elected to do so.

As a consequence of the collective results of various dropout studies, valuable information has emerged that makes it possible to characterize a potential dropout. Repeated pieces of research have consistently found a commonality of recurring variables that could be associated with dropping out of school. These variables have been used to develop dropout prediction models that can be categorized as (a) composite index models, and (b) statistical prediction models.

Composite Index Models

Several researchers investigated why some students drop out of school (Cervantes, 1965; Greene, 1966; Howard, 1972;

Neil, 1979; Zeller, 1966). They found a core of recurring variables that were frequently associated with dropping out of school. From this core of recurring variables, they developed composite indices that could be used as specific determinants of potential dropouts. These composite index models were checklists that identified what they considered to be the important characteristics of school dropouts. Students who possessed most of these characteristics were regarded as potential dropouts.

The following abbreviated version of a checklist by Greene (1966, pp. 42-43) is a typical example of a composite index model:

1. Consistent failure to achieve in regular school work.
2. Grade level placement two or more years below average for the grade.
3. Irregular attendance and frequent tardiness.
4. Overantagonism toward teachers and principals.
5. Marked disinterest in school with feelings of not belonging.
6. Low scholastic ability.
7. Low reading ability.
8. Non-participation in extracurricular activities.
9. Frequent changes of schools
10. Unhappy family situation.

A Newfoundland potential dropout profile has been drawn by Crocker and Riggs (1979):

This profile supports the conventional view of the dropout: Those who drop out ... tend to be older than others at the same grade level, engages (sic.) in fewer school activities, and have failed at least one grade prior to school leaving. As expected, dropouts also tend to come from larger families, of lower socioeconomic status who are less supportive of the child's school work. (p. 85)

They also found that females tended to drop out of school as often as males.

Statistical Prediction Models

Several investigators of school dropouts were dissatisfied with the number of studies that did not go beyond a stereotyped composite image of the school dropout (Childers, 1965; Hopkins, 1964; Markus, 1964; Smith, Tsing & Mink, 1971). A major weakness of checklists was that the lists did not differentiate one characteristic from another. Each factor was given equal importance. Another weakness of checklists was the lack of knowledge regarding how many items must be checked before the teacher realized that a student was a potential dropout.

One of the first attempts to statistically predict which students will drop out of school was made by Epps and Cottle (1958). After a review of the literature they found 79 items that differentiated dropouts from potential graduates. By designing 10 items to measure each characteristic, they devised a 150 item commercial instrument, The School Interest Inventory, that has since been validated for the purpose of predicting school dropouts.

By selecting 33 characteristics of school dropouts, Walters (1969) determined a composite set of variables that discriminated between dropouts and persisters in a Kansas City high school. Through multiple discriminant analysis she found that it was possible to use these same characteristics in the identification of potential dropouts in another Missouri School.

In an attempt to determine the extent to which certain selected factors were pertinent and consistent in identifying potential dropouts, Hopkins (1964) grouped the independent variables under the following headings:

1. Scholastic ability, achievement, and level of reading.
2. Parental occupation and level of education.
3. Attendance, participation in school activities, and stability of elementary school enrollment.

Using these factors he was able to predict the probability of students dropping out of school.

Using an approach similar to that of Hopkins, Childers (1965) found school achievement, personal and social adjustment, and family background to be the most effective factors in discriminating between ninth-grade dropouts and persisters. He utilized these discriminating factors to predict which students would drop out of school. Childers' (1965) results also supported the validity of Cottle's School Interest Inventory as an effective method of identifying potential high school dropouts.

Using a Newfoundland sample of dropouts, Stack (1973) examined 21 variables such as the Canadian Tests of Basic Skills results, term marks, intelligence quotients, and teacher ratings. From these variables he devised a model that discriminated between school dropouts and persisters.

Still another attempt to predict which students will drop out of school was made by Markus (1964). He devised a predictive model to represent the most salient factors associated with students who drop out of school. His review of the literature uncovered 21 related studies on potential school dropouts. Collectively, these studies identified 34 recurring factors that were characteristic of students who dropped out of school. He categorized these characteristics according to (a) school performance, (b) individual performance, and (c) family performance. Based upon the frequency of the number of authors who have cited a particular factor as being causal to dropping out of school, the factors contained in the category "School Performance" appear to be those most frequently cited.

Dropout Variables Used in this Study

The variables associated with school dropouts that have been selected for this study have been taken from Markus' (1964) model (see Appendix A). Instead of using all 34 variables identified by Markus, this study used only five variables. One of these, school achievement, was divided

into the categories of English grade point average, Mathematics grade point average, and Science grade point average. No variables were selected from the "Family Performance" category because research has shown that such factors as socioeconomic status of the family did not significantly influence the dropout rate in Newfoundland (Duncan, 1973; French et al., 1981; Gillespie, 1979). Also, the primary aim of wilderness camping was to modify school-related behaviors. Consequently, school-related variables were used to identify the potential dropout students. Based on their frequency of occurrence in Markus' (1964) research, the following variables were the most salient and were considered encompassing enough to assist the task of determining which students will drop out of school:

1. Extracurricular activity
2. School attendance
3. Grade failure
4. English grade point average
5. Mathematics grade point average
6. Science grade point average
7. Reading achievement.

Extracurricular Activities

There is a consensus of opinion among researchers that lack of participation in extracurricular activities at school, is characteristic of the school dropout. Thomas (1954) went so far as to maintain that it was this factor

that furnished the most striking difference between dropouts and persisters. He studied the same high school students for four years (1947-51). Using a statistical analysis involving 10 stated predictors, he found, in order of importance, the most significant predictors were lack of extracurricular participation, intelligence, and father's occupation.

Livingston (1958) combined extracurricular activities with the number of grades failed and the status of the person with whom the student lived. He found a significant positive correlation with dropping out of school. He also reported that 85 percent of the students did not participate in informal classroom and playground activities. The teachers classified 60 percent of the students as non-participants or isolates.

A Maryland study by Williams (1963) also emphasized the positive correlation between dropping out of school and non-participation in extracurricular activities. He noted that two-thirds of the 13,715 questionnaires returned by school dropouts disclosed evidence of non-participation in extracurricular activities.

Caravello (1958) regarded non-participation in school groups and non-participation in extracurricular activities, especially in those organizations which elect members, as two of the five most significant characteristics associated with school dropouts. Similarly, Opstad (1958) combined lack of extracurricular participation with intelligence, grade

point average, and parents' education. He found a positive correlation between these factors and premature withdrawal from school. Hopkins (1964) found non-participation by both sexes to be a significant predictor of premature withdrawal from school.

Table 1 illustrates four studies that compared the percentage of dropouts and persisters who did not participate in extracurricular activities.

Table 1

A Comparison of Dropouts and Potential Graduates on Lack of Participation in Extracurricular Activities

Author(s)	Year	Percent of dropouts	Percent of Potential Graduates
Fagan & Rogers	1979	66.7	37.5
Howard	1972	86.0	24.7
Snepp	1956	79.0	X
Walsh	1964	76.0	15.0

Note: X = not reported

Days Absent

Being frequently absent from school has been found to be a characteristic of a school dropout. It is one of the phases that potential school dropouts pass through as they "generally follow a well defined path towards dropping out" (Howard & Anderson, 1978, p. 223). While the potential dropouts and potential graduates are still in elementary school there is not much difference in their rate of absenteeism (Greene, 1966; Tuel, 1966). However, as these two groups progress through school, there is a regression in the dropouts' rate of attendance.

Despite finding differences in the percentage of dropouts who had chronic attendance problems, all investigators reviewed found that dropouts were absent from school more often than graduates (Greene, 1966; Hopkins, 1964; Howard, 1972; Lloyd, 1968; Stroup & Robins, 1972; Tuel, 1966; Zeller, 1966). Typical of these researchers was Howard (1972) who found that 22.7 percent of dropouts missed 26 or more days, 30.7 percent missed 16 to 25 days, and 4.7 percent missed 0 to 5 days. The comparable figures for graduates were 0.5 percent, 8.2 percent, and 48.5 percent respectively. He did not report the values for the 6 to 15 days category.

Although they did not deal with attendance specifically, two studies investigated a related variable, reaction towards school. Potential dropouts were asked how they felt about attending school. Duncan (1973) reported that 21.7 percent of potential dropouts responded that they did not want to

come to school. Morton-Williams and French (1968) found that 51 percent of male, and 60 percent of female, potential dropouts did not look forward to going to school.

Grades Failed

Grade failure is the variable most frequently listed by researchers as being highly correlated with dropping out of school. The pattern of failing a grade usually begins in the primary and elementary schools. If a child has to repeat the first or second grade, the chances of him not graduating are eight in ten (Schreiber, 1962). Similarly, Bowman and Matthews (1960) reported that 60 percent of grade repetition occurred in the first and second grades. In a later study, Stobo and Ziegler (1973) stated that 55 percent of the grades repeated by dropouts were in the elementary school. Swan (1961) made a similar observation by noting that a person is a potential dropout if he/she fails one or more grades, especially first, second, eighth or ninth grade.

It appears, then, that there is a variety of opinion among researchers about which grades are the most important for predicting school dropouts. However, there is some consensus that the elementary grades are the most crucial, particularly grades one and two.

Some other studies reported findings that did not indicate whether the grade repetitions occurred in elementary school or high school. Leven (1970) claimed that as many as 80 percent of the dropouts had failed by at least one year.

This finding is comparable to that of Thomas and Knudsen (1965) who reported dropout retardation figures of 74 percent and 72 percent for Florida and Louisiana respectively.

The relationship between grade failure and the rate of dropping out of school can vary from one geographic region to another, or one school district to another. Martin (1962) found that 75 percent of students who dropped out of school in Newfoundland had repeated one or more grades. This was consistent with Kennedy (1965) who reported in another Newfoundland study that 76.6 percent repeated one or more grades. In a study that yielded a contradictory finding, the Cape Freels Board in Newfoundland revealed that only 39.3 percent of its dropouts had repeated at least one grade (French et al., 1981).

Several writers have made a variety of observations about the effects of repeating a grade. Cook (1956) saw grade repetition as one of a "multiplicity of factors which, when operating together, present the student with seemingly unsolvable problems which he can most easily meet by withdrawing from school" (p. 56). Greene (1966) said grade failure in conjunction with the age discrepancy between dropouts and their classmates led to dropping out as an ego saving device.

Craig (1957) described a method to predict dropouts based on grade repetition.

Underline in red all of the students overaged for their grade. Underline in blue the names of those

who are in the lowest quartile of their class. Those underlined in red and blue will be your most probable dropouts. (p. 331)

English, Mathematics, and Science Grade Point Averages

Since the late 1930's low academic achievement has been considered as having a significant relationship with dropout behavior (Douglas & Wind, 1937; Richman, 1939). These researchers stated that failure in two or more subjects was a valid indicator of whether or not a student would drop out of school. A decade later, Dillon (1949) found that 74 percent of the dropouts he studied had failed at least one subject, 13 percent had failed at least two subjects, 17 percent had failed three subjects, and 30 percent had failed four or more subjects. Similarly, Williams (1963) reported that 48 percent of school dropouts had failed three or more subjects. A variety of other studies consistently concluded that grade point averages represented a difference between dropouts and persisters (Allen, 1953; Kirkhus, 1963; Van Dyke & Hoyt, 1958; Walsh, 1965).

In two related studies (Bowman & Matthews, 1960; Hemreus, 1964), the researchers matched grade point averages with intelligence quotients and socioeconomic status indices. Both studies found that dropouts tended to have less measured intelligence, come from families with lower socioeconomic status level, and have lower grade scores than did graduates.

An attempt to determine a more accurate means of predicting school dropouts was made by Opstad (1958). Using

the Iowa Test of Educational Development and high school grade point averages, he developed a model which could predict, with 81 percent accuracy, which students would drop out of school.

Like the studies on the effects of grade repetition in causing students to drop out of school, school achievement was also found to be a good predictor that was generalizable over both time and geographical area. Howard (1972) studied the pupils of a Colorado school and discovered that 68 percent of the dropouts, in comparison to 8.2 percent of the graduates, were below average in academic achievement. Other studies such as Mink and Barkers' (1968) investigation of dropout proneness in Appalachia, and Nachman, Gelson and Odgers' (1964) study of Ohio high schools agreed on the significance of school achievement in predicting school dropouts.

Recent Canadian studies also attest to the fact that there is a causal relationship between academic achievement and dropping out of school. Young and Reich (1974) revealed that the dropouts whom they interviewed had difficulty with various subjects since primary school. At the point of dropping out of school, 83 percent of the dropouts were below grade level and had accumulated overall fewer credits than had persisters of a comparable age. It was concluded that the best predictor of dropping out was a low level of scholastic achievement. Similarly, Stobo and Ziegler (1973) conducted a survey of two high schools and reported that 71

percent of the dropouts failed at least one subject and 19 percent failed every subject.

Several Newfoundland studies investigated the relationship between academic achievement and dropping out of school. Fagan and Rogers (1979) listed mathematics and science as the subjects most frequently failed. Also, on the average, dropouts were one year below the provincial norm for the Canadian Tests of Basic Skills, while graduates were one year above the norm. Kennedy (1966) found that mathematics was the subject most frequently failed by dropouts. Even though he did not cite the most troublesome subjects, Duncan (1973) found that the potential dropouts in the Bay D'Espoir area of Newfoundland were further behind graduates in educational achievement and that the achievement differences increased grade by grade.

Related to the poor academic achievement is the type of program in which the student is enrolled. Low academic achievers tend to come from non-academic programs. Stobo and Reich (1973) compared the dropout rate between two metropolitan high schools. They discovered that only 13 percent of the dropouts were from an academic course of study. Gilbert and Ellis (1972) reported that 58.6 percent of dropouts were from non-academic programs. Doolittle (1965) compared the holding power of different types of programs in four Detroit schools. He found the holding power to be 94 percent for the college preparatory program and 52 percent for the general program. Gillespie (1979) discussed programs but concluded that "due to the fact the

programs....vary....from province to province, country to country, it would not be fruitful to discuss....withdrawal rates" (p. 27).

Reading Achievement

Success in school usually leads to staying until graduation. This is highly contingent upon the student's ability to recognize words and comprehend their meaning. Childers (1965) described problems in reading in a way that suggested it was the catalyst that initiated a chain reaction of events which ultimately ended in the student dropping out of school.

The student who has not learned to read ... often finds himself at a disadvantage in his pursuit of other scholastic goals. This often leads to subject and/or grade failure which in turn results in a loss of interest in school and an increase in absenteeism. (p. 11)

Hopkins (1964) stressed the importance of reading as a starting point to investigate the major factors which caused school dropouts. To emphasize this, he said:

Every poor reader-and he starts to show himself early-is a potential dropout. He starts to fail early in elementary school and the habit of failure and frustration deepens as he "progresses" - i.e., advances in age-through school. The psychological mechanisms involved in this process of deteriorating language development are a significant part of the larger pattern of deteriorating development. (p. 15)

In a study conducted in Indiana, Snapp (1956) found that only 30 percent of 159 dropouts were reading at or above

grade level. He also reported that 48 percent were two or more years behind grade level, and 21.4 percent were three or more years behind. Kirkhus (1963) looked at the reading scores of students who dropped out after grade eight and discovered that only 37 percent were reading at or above grade level. In a statewide Maryland study, Williams (1963) found that over half of the dropouts were reading below grade six equivalency. Ten percent were reading at less than the grade three level.

Using a sample of grade ten students, Penty (1960) compared 593 students who scored among the top 25 percent on their last reading test with 593 students who scored among the bottom 25 percent. Eventually, 49.9 percent of the poor readers dropped out of school in comparison to 14.5 percent of the best readers.

A study in Colorado by Howard (1972) revealed that 50.7 percent of the dropouts were below their grade average in reading. This was compared with 11.8 percent of the graduates. Similarly, in an earlier study in rural Georgia, Bledsoe (1959) found that a grade level of 7.9 was the mean reading comprehension score for students who dropped out in grades nine and ten. For the graduates the mean was 8.9.

Lack of reading ability was also cited in the studies by Gillingham (1964), Livingston (1958), Schuster (1971), and Zeller (1966). The Newfoundland studies by Crocker and Riggs (1979), French et al. (1981), Kennedy (1966), and Warren (1973), all mention lack of reading ability as being

associated with dropping out of school:

Not all the findings were conclusive. Childers (1965) said that while reading retardation led to dropping out for males, this relationship was not observed for females. Davis (1962) found an insignificant reading achievement difference between potential dropouts and potential graduates. Markus (1964) said it made little difference in comparison to other factors. Stack (1973) concluded that reading itself did not contribute significantly to dropping out. Walters and Kranzler (1970) regarded the relationship between reading achievement and dropping out as being overrated.

Dropout Prevention Studies

The major emphasis of programs designed to keep potential dropouts in school has been on tailoring the school curriculum to meet the needs of individual students and combining work experience with academic subject instruction. These approaches have not proven to be very successful because the interplay of forces that cause students to withdraw from school have become highly crystallized and irreversible by the time they reach high school. To be more effective, dropout prevention programs need to be initiated very early in the students' schooling. Zeman (1974) stated that dropout proneness develops as early as grade one. However, this should not preclude the implementation of a high school dropout prevention program. Such a program can be

instituted at the high school level until effective measures can be taken at the elementary school level.

The most common means employed to prevent dropping out was modifying the school curriculum. Zeller (1966) cited five programs in different parts of the United States that were based on modified curricula. Raymond (1978) described a dropout program in his school that used counselling and tutorial services to focus on improving reading skills, school attendance, class performance, and self concept. There was a 26 percent decrease in the dropout rate. Voss (1976) investigated the difference between a control group and an experimental group of 50 potential dropouts. They were matched on the basis of grade point average, number of absences and disciplinary referrals. She found the experimental group had a higher grade point average and lower incidence of disruptive behaviors. There was no significant difference in absenteeism.

Neill (1979) described a successful program developed in Wichita, Kansas that has since been employed in 10 American states. Project DEEP is the acronym for Diversified Educational Experiences Program and it was designed for use with potential dropouts. DEEP provided students with the opportunity to receive academic credit for a project of their own design using such electronic media as cameras and movie projectors, and non-electric media, such as art supplies. It is reported to have reduced the absentee rate by 30 percent and the dropout rate by 37 percent.

Another thrust of dropout prevention programs has been the use of work experience in combination with academic courses. Dobransky (1975) investigated the effectiveness of Operation Stay In, a work-study program in Cleveland, Ohio. The sample population included 189 grade ten, potential dropouts. He found that more members of the experimental group stayed in school longer than did members of the control group. Shuttleworth (1979) described the Student Employment Experience Center Project that was established to prevent school dropouts in Toronto. While the effectiveness of the program was lauded, values were not given for the rate of dropout prevention.

A different approach to dropout prevention was reported by Schull (1977). He surveyed those schools in Michigan that had adapted the Outward Bound program for combating various school problems and found that 13 percent of the schools used it for dropout prevention.

Introduction to Wilderness Camping Literature

One impulse from a vernal wood
May teach you more of man,
Of moral evil and of good,
Then all the sages can.

"The Tables Turned"
William Wordsworth

The use of camping as a means of effecting change in the way a person behaves has its roots in antiquity. It is

an extension of a recurring theme in philosophy and literature that the life and actions of mankind were more desirable in an earlier phase of history. Health and Happiness could be achieved by the "simple life." Jean Jacques Rousseau coined the term "noble savage" to support his contention that civilization spoiled ideal man's natural state where he was happy and virtuous, and instead, led to his corruption. Later, Thoreau expounded similar ideas of naturalism in his book, Walden. Camping is also a part of our national consciousness where one nostalgically reminisces about the romance of the wilderness, the frontier and the pioneers.

Organized camping has existed in North America for over 150 years. However, it is within the last 50 years that camps have been conceived as "treatment" centers. McNeill (1957) maintains that camping has always aimed at providing therapy. At first it was more concerned with improving the mental health of "normal" urban children by focusing on the importance of fresh air and a return to the natural environment.

Blumenthal (1937) noted that the literature on camping was free of references to psychology or therapy until the growth of the fields of education, psychology, and social work in the 1930's. The camping philosophy that "food, fun, and nature was sufficient to develop better youthful citizens" (Morse, 1957, p. 15) proved to be unsound. Many of the youths who had been exposed to camping were found to be

delinquency prone and some had emotional problems. This required a change in the philosophy of therapeutic camping. Later, other things such as overall mental hygiene and special clinical services became incorporated into the traditional offerings of camps. The growth of education, psychology and social work, combined with a change toward a philosophy of therapeutic camping led to a proliferation of therapeutic camps. These camps varied in purpose, character, length, and setting. The variety of problems they attempted to treat could be described as physical, psychological, social and/or legal. They were aimed at providing the camper with a social setting under professional guidance and were devoted to the improvement of a particular condition (Weisman, 1965). All reports concerning these camps, were consistent in applauding their effectiveness as a form of therapy.

Despite the fact that therapeutic camps have existed for so long, there is a relative paucity of literature concerning them. A review of wilderness literature reveals a noteworthy pattern. Several forms of the literature pre-date 1965. There is an hiatus of research for the next dozen years. The bulk of literature has been written within the past decade. This rebirth of interest in wilderness camping coincided with the transplanting of European Outward Bound schools in North America in the 1960's. The success of these Outward Bound schools led to an increase in interest in camping. Outward Bound programs, and adaptations

thereof have been used as alternate treatment methods by juvenile correctional centers, mental hospitals, and various social agencies.

Criticisms of the Therapeutic Benefits of Wilderness Camping

Wilderness camping, as a form of therapy, has not been without its critics. Criticism of therapeutic camping have been directed at the concept of therapeutic camping as well as the lack of adequate research.

The Concept

Criticisms of the concept of therapeutic camping have been reviewed by McNeil (1957). The major criticisms included:

1. Therapeutic camping was a forced social interaction with the same treatment prescribed for all campers, regardless of the types of behavior they exhibited.
2. The amount of benefit that could be derived for a maladjusted child who attended a therapeutic camp for a short period of time was questioned.
3. Too many people were accepting a fashionable assumption that therapeutic camping was good for all young people.
4. Many maladjusted people improve their behavior whether they receive psychotherapy in a wilderness camp or not.

It is significant to note that a review of the literature indicated that criticisms of the concept of therapeutic camping were almost all levied prior to 1957. A plausible

explanation is that these criticisms were acknowledged and counteracted by a change in camping philosophy and the employment of more innovative and effective approaches to the treatment of undesirable behavior. These new innovative approaches; for example, behavior modification, were founded on more recent psychological theories.

Adequate Research

As far back as 1957 McNeil noted that there was an "unequivocal statement" (p. 5) on the measured success of therapeutic camping. He charged that therapeutic work "proceeded on faith and the energy of its supporters" (p. 11). Various positions have been advanced as to why the benefits of therapeutic camping have not been sufficiently documented. Perhaps the most critical analysis about the evaluation of the therapeutic effects of camping has been documented by Byers (1979). She noted that the evaluation research reported in the literature is characterized by inadequate investigation of outcome evaluation and process evaluation.

Outcome evaluation. Outcome evaluation refers to the programmatic effects of camping. While studies under this heading show success in treating a variety of undesirable behaviours, they are not an evaluation for the following reasons:

1. Some studies treated behaviors that were neither a part of the stated philosophy of the camp, nor a behavior

that prompted referral.

2. Camper behavior was not evaluated even though the behavioral objectives were written for some students.
3. Too many studies lacked a control group.
4. The criteria for success were not defined.
5. Some results were tentative because they were based only on a small sample.
6. There was no demonstration of a causal relationship between success in a camp therapy program and a reduction in undesirable behavior outside the therapy program.

Process evaluation. Process evaluation refers to the content of the camping program. Like outcome evaluation, there is scarcity of research that includes an adequate evaluation of the process. Criticisms under this category occurred because the camping programs were not specified.

Byers concedes that it can be inferred from the studies that camping produces positive effects but the studies have not addressed any or all of the questions relevant to their evaluation. Too many studies are characterized by a lack of control groups. What is needed to measure effectiveness is the documentation of the actual content of camping programs. In addition, an assessment of the short term outcomes has to be made in relation to changes in the camper due to the camp

program. This is to be followed by the determination of long term outcomes by following up the campers after their completion of the programs.

Dustin and Rentschler (1980) stated that attempts to analyze the effectiveness of therapeutic camping were ineffectual because researchers looked at the component parts rather than the camping community as a whole. They used the concept of "synergy" in advocating that the whole camp should be the appropriate unit of analysis. Synergy was defined as "a system's total output can be greater than that which can be explained by examination of the system's individual parts" (p. 46).

Like Byers, Gaston, Plouffe and Chinsky (1978) criticized studies that gave no detailed evaluation of the camping program or did not include control groups. They cited the lack of ratings from multiple sources such as clients, parents, and agencies as another major criticism in not demonstrating effective evaluation.

After an evaluation of the Ekerd Foundation Therapeutic Wilderness Camping Program, Griffin and Carter (1979) concluded that evaluation of this program in the past "suffered" from four limitations:

1. Concentration on cause and effect relationships.
2. Short term internal studies which tend to lack credibility due to political pressure and the researchers' dependance on the program.
3. Bias in sample selection.

4. Over reliance on the security of an experimental design.

Harmon (1974) criticized studies that were concerned with evaluating campers' behavior. He questioned the validity of camp counsellors' ratings of campers' behaviors because many observable behaviors can not always be taken as an outward sign of an inner attitude. He was also critical of how much behavior was really observed in the field with the students doing different things. Similar criticisms have also been noted by Jensen (1963).

In two separate articles, McNeil (1963a, 1963b) dealt with the problem of evaluating the effectiveness of camping. McNeil (1963a) investigated the perceptions of parents, teachers, therapists and campers on the effectiveness of a summer camp for emotionally disturbed boys. He revealed a tendency for all respondents to report positive changes when assessing behavior on a broad level. However, when the respondents were asked to cite the specific behaviors their perceptions changed. He concluded that the effectiveness of the ratings of parents, teachers and therapists seemed to be more apparent than real. McNeil (1963b) investigated the complexity of research and its application to evaluating the effectiveness of camping therapy. The results of these two studies concluded that the failure of adequate evaluation stemmed from not asking the right questions, insufficient planning and pre-testing, and an "unwillingness to use orthodox instruments in unorthodox ways" (p. 32).

McSweeney and Trout (1979) attempted to predict the outcome of a wilderness camp on the social behavior of campers through the use of the Jesness Behavior Checklist. The campers also completed a self-rating scale. They found that "successful" youths had more variability in their pattern of behavior. The reason, they hypothesized, was that counsellors payed more attention to those youths they liked best. The self-ratings were not a useful predictor of treatment outcome. Either youths were not good judges of their behavior or they viewed their behavior differently than did the counsellors.

A different explanation of the lack of research on the effectiveness of camping was advanced by Shniderman (1974). He argued first that camping originated in "the world of recreation rather than psychotherapy" (p. 354). A second argument was that camping programs tend to be too brief for a suitable evaluation to be completed.

Therapeutic Benefits of Camping

It is often assumed that therapeutic benefits are inherent in wilderness camping. The underlying assumption is that a rugged outdoor setting contains many of the elements needed to effect healthy behavioral change in people. The campers are removed from civilization for a period. This forces them to rely on their survival training and group cohesion. The challenge of survival, the rewards of group

dependance, and the opportunity to grow psychologically-- all are provided by camping through the medium of "the milieu, the program and interpersonal relationships" (Rosen, 1959, p. 87). Johnson (1966) succinctly noted that, "mountains seem more likely to move men than men are to move mountains" (p. 2).

Loughmiller (1965, 1979) maintained that wilderness camping satisfies boys' desires for adventure and exploration in the out-of-doors. Kelly and Baer (1969) attributed the success of their camping program to the fact that it satisfied the delinquents' proclivity for action as a solution to conflict, especially with the addition of physical challenge. Miller (1958) said camping provided an opportunity to shape such negative behavioral traits as toughness, autonomy, shrewdness and danger seeking. Brown and Simpson (1976) reasoned that therapeutic benefits accrue from camping because it is an area for intrinsic reinforcements where the student "learns through activities and is covertly taught about himself, others and the environment" (p. 44).

A camping expedition with Wyoming, adolescent, mental hospital patients was described by Garlie and Hoxworth (1970). Their camping experience was founded on the following ideas:

1. A rugged outdoor venture was what most adolescents sought.
2. The expedition was based on the achievement of functional success.
3. The participant was given a chance to participate in the mini society created by the group.

4. A constant system of rewards, success and immediate gratification was used.
5. Adults were used as models.
6. Camping provided opportunities for close association with a peer group.
7. Completion of the camping program gave a sense of accomplishment.

The authors maintained that their program helped the patients develop good judgement, honesty, courage and determination. It also taught the campers to respect themselves, others and nature.

Another program, the Crockett Therapeutic Wilderness Camp, was examined by a team of researchers (Bailey, Drommes, Faherty, Ray and Selman, 1978). To them, therapeutic camping combined the advantage of peer group treatment with recreation therapy:

It (camping) removes the juvenile from the complex pressures of functioning in a home, school or community. He is brought into the basic reality of living--survival. He is given the opportunity of making life decisions and then experiencing the consequences of their actions.
(p. 2)

Through group problem solving sessions the camper learns how his behavior affects other people. He becomes sensitive to himself and others. This emphasis on the group is similar to Loughmiller's (1965) view that it becomes the basis for reconstructing relationships at home and at school.

The affective benefits of therapeutic camping was investigated by Harmon (1974). He concluded that camping led to an hierarchy of improvements in the campers' self

confidence, interpersonal communications, group interaction skills, and spiritual values.

According to Griffin and Carter (1979), camping provides a therapeutic milieu by offering romance, challenge and enjoyment. All these are conducive to effecting behavior change. An outdoor setting requires the ability to cope and solve problems that are more apparent and vivid than those in an artificial environment. Another benefit mentioned was that it was less stigmatic as a form of treatment than were psychological clinics.

A Canadian study by Armitage (1976) listed some of the advantages of wilderness camping as providing the opportunity to: (a) maintain basic organization to life, (b) develop a cooperative and independent relationship, (c) feel emotions and respond to them in a socially acceptable manner, (d) verbalize thoughts and feelings, and (e) become increasingly sensitive to others.

Camping has been used as an alternative to hospitalization for the treatment of emotionally disturbed people (Dudley & Hughes, 1973). They stated that camping was a more complete milieu therapy than any type used in Texas hospitals. Milieu therapy was defined as "surrounding a child by his therapy program to such an extent that every facet of his living is incorporated into it, every experience is used therapeutically" (p. 46). These two researchers espoused a convincing rationale for the use of camping as an alternate treatment. The major value of therapeutic camping,

as they saw it, was the problem solving opportunity it provided. Camping demands that decisions be made. These decisions relate to simple physical needs which, if postponed, will cause some discomfort.

Collingwood (1971) found that a rugged camping experience provides therapy in a total context. The element of challenge and the group dynamics enhance the campers' physical, intellectual, emotional, and interpersonal behavior. He contended that by affecting these behaviors, a camping program can meet all the needs of problem youth and directly facilitate their rehabilitation.

The benefits of therapeutic camping have been eloquently documented. A summary of this phase of the literature clearly demonstrates that all successful camps noted the following four factors:

1. Benefits were derived from the social and physical milieu.
2. Activities were designed to achieve functional success.
3. Challenges were provided by physical and emotional stress.
4. Camping provided a group living experience.

A wilderness camp setting has an uncanny ability to simplify things, show the timelessness of nature, and give a sense of order and stability. The occurrence of natural events such as rain, cold, and other physical discomforts, to which no camper is immune, eliminates rank, social status,

background and ability. This has value in that it forces a uniformity upon the group that ultimately enhances group cohesion.

Several writers, including Bailey et al. (1978), Griffin (1979), Hughes and Dudley (1973), Johnson (1965), McNeil (1962) have applauded a natural setting as being therapeutic. It is devoid of the complex pressures and previous associations of failure and transgressions that occur in the social environment of the potential dropout. Also, it offers a physical freedom not found in school.

Contrary to the view that education is something that takes place only in the classroom, education does take place elsewhere. The wilderness setting facilitates two essential ingredients of the educational process; that is, interest and curiosity--both of which can be referred to as fundamental aspects of motivation. It is natural for students to participate in new experiences and adventures. The camp satisfies boys' desires for adventure and exploration.

The wilderness responds consistently, firmly, and directly. This exactness could possibly never be reached by an individual therapist and acts as a catalyst for behavior change. (Kaplan, 1979, p. 40)

Most camps were oriented toward the achievement of functional success for all campers regardless of ability. This is very important when one considers that failure has characterized many dimensions of the campers' lives for a significant period of time. Camping can be a constant system of rewards and successful experiences. A functional

task like preparing a delicious breakfast for the rest of the group can bring with it an enormous sense of achievement and immediate gratification. Success builds confidence and prompts other success.

One of the main tenets of the Outward Bound program is that students should be subjected to an element of physical challenge. Through a regulated series of physical and mental stresses, the camper learns he can do more than he thinks he can. Little value is gained from telling a camper that he is capable of doing more. A set of circumstances is needed whereby he can demonstrate it to himself.

Studies by Kelly and Baer (1968, 1969, 1971) have shown that activity programs have a positive effect on adolescents in general. The programs were especially effective when they called for a high degree of challenge and excitement followed by periods of relative quiet. Goodyear (1968) said camping implemented the physical challenge that modern society has largely eliminated from our lives. She noted that youths have a desire for a genuine test of strength and endurance that remains unexpressed or is expressed in the wrong manner. Physical activities forced a camper to confront himself and accept his limitations rather than rigidly defend a self image that is a facade for inadequacy. His traditional defense mechanisms such as denial and projection become unacceptable. There is little opportunity for camouflage or evasion. Reality is difficult to avoid.

Camping provided a group living experience which was

viewed as the essential ingredient in precipitating behavioral change and in initiating the carry-over process. The positive relationships that the camper experienced would become the basis for restructuring his relationships in his social environment after he returned home. Living together intensified relationships and forced campers to develop the strengths, interpersonal skills, and self-understanding that will help them function in their society. By providing the camper with the freedom to make decisions and participate in group problem-solving situations, he is able to see himself as an important, independent and valuable citizen of this mini-society. He may feel useful for the first time and realize he has the potential for growth and achievement. In some ways this mini-society parallels the larger society. He must seek solutions to immediate problems, establish interpersonal relationships, and deal with power structures. These demand the development of coping skills and problem solving techniques which, in turn, produce changes in the self-concepts of the students.

The value of small group interaction in a living situation has a very powerful influence on the affective learning of the camper. "Personality changes are not so much the result of something that is taught as they are of a relationship that is established" (Loughmiller, 1979, p. 37). Through group participation, campers receive feedback from other campers. Living closely together and participating in common, often stressful, activities,

causes campers to realize that they need each other. The camping group is a self-contained unit where interaction is continuous. Campers can see themselves for what they really are. They typically come to understand, accept, and verbalize their feelings rather than repress them. Feelings of anger and/or frustration are brought into the open and discussed by the group. This offers the opportunity to transform mistrust into trust. Through consistent guidance campers are given a model to use in helping them adjust their behavior.

Categorizations of Wilderness Camping Research

A review of the literature on the therapeutic benefits of camping has shown that a variety of behaviors have been treated at a number of camps. The research can be classified according to the categories of (a) emotional disturbance, (b) juvenile delinquency, (c) self-conceptualization, and (d) school behaviors.

Emotional Disturbance

Therapeutic camps that treat emotionally disturbed people appear to be more numerous than camps for any other therapeutic purpose. Like all therapeutic camps, those for the emotionally disturbed vary from one day in duration (Shniderman, 1974) to year round operation (Loughmiller, 1965).

Feldman, Wodarski and Flax (1975) placed five anti-social boys in a residential summer camp which contained 81 prosocial boys and 75 prosocial girls. The campers' ages ranged from 10½ to 12½ years. The five boys were randomly selected from 53 who took part in a community treatment program. Self-ratings were completed by the five antisocial boys. The results revealed that the camp environment and the prosocial peer group exerted an immediate and consistent prosocial influence on them.

Nine adolescent boys, aged 13 to 17, were taken on a five-day therapeutic camping trip to an Alabama state park (Hobbs & Radka, 1975). These boys were from low socioeconomic backgrounds and had a history of shoplifting, academic underachievement, withdrawal, and rebelliousness. The group was characterized as being negative towards themselves and others. This was the specific behavior the investigators sought to eradicate. Therapy consisted of behavior modification through a token economy. The results of the study indicated that the total camping and treatment program produced positive effects. They also reported that the boys became more close-knit as a group. Differentiation of the effects of camping from the effects of the treatment was not reported.

McCreary-Juhasz (1968) investigated the effectiveness of a two week summer camp on 22 emotionally disturbed children. They were referred by a mental health clinic. The results indicated improvement in all but one child.

Improvement in the children was seen in more realistic aspirations, greater self confidence, better communication with peers, and better responses to discipline. The investigator admits that the results may have been due to maturation, new teachers, or a new situation. There was no control group.

An article by Mand and Green (1973) described the Devereux School summer camp program for adolescent boys and girls. It occurred in a rural, semi-primitive section of Maine. The format of the program was designed around shared and self-direct activities. The activities included work experiences, academic learning, recreation, and service to a community. The authors concluded that 90 percent of the campers showed improvements in such behaviors as not running away, being more tolerant of other campers, reducing the rate of drug taking, and remaining positive during dis-appointments.

Rawson (1973) ran two 10 day camps for emotionally disturbed boys whose ages ranged from eight to fourteen years. The campers were referred by social agencies. The program was aimed at: (a) alteration of the behaviors that caused difficulty in relating to others, (b) improvement of academic skills to alleviate feelings of inferiority and acting out, and (c) exposure to highly reinforcing models and identification with teachers and therapists of the same sex. He found that a short term, highly structured, therapeutic camping program was effective in dealing with problematic behavior in children. Therapeutic camping, by the act of

removing the child from an aggravating environment and putting him/her into an enjoyable one, provides an opportunity for identification with appropriate adult models.

A successful summer camp in Tacoma, Washington, was described by Rosen (1959). This camp consisted of 48 male and female campers between the ages of seven and thirteen, all of whom represented a variety of unacceptable behaviors. Such usual camping activities as swimming and games were combined with discussions and psychodrama to modify deviant behavior. Interwoven with these activities were the elements of meaningful interpersonal relationships with adults who enabled each child to find success in some activity.

An attempt to validate the belief that camping is therapeutic was made by Shniderman (1974). His study was conducted at Greentree, a boys' day camp operated by a psychiatric clinic in Bethesda, Maryland. A control group and an experimental group of five to twelve year old boys were chosen with 26 boys in each group. Both groups were given a pretest and posttest of the California Test of Personality. Parents and teachers of all subjects were given pre- and post-treatment questionnaires to rate the subjects' behavior. The students' performance on the test and the teachers' ratings of the students confirmed the hypothesis that improved social adjustment would result from attendance at the camp. However, the results of the parents' questionnaires were not as conclusive.

Juvenile Delinquency

The use of therapeutic camping as an alternative to juvenile correctional centers has spurred much interest. An often cited study by Kelly and Baer (1971) was conducted to determine if an Outward Bound school was more effective than correctional centers in reducing the recidivism rate of adjudicated juvenile delinquents. The experimental group of 60 juvenile delinquents were placed in Outward Bound schools in Minnesota, Colorado, and Maine. The 60 control subjects were treated by the Massachusetts Division of Youth Services. After one year of parole, only 20 percent of the experimental group committed a crime, while this statistic for the control group was 42 percent. The three Outward Bound schools, each offering a program variation dictated by geography, were compared for their effectiveness. It was found that delinquents who were placed in the Minnesota school had the highest recidivism rate, 42 percent. The Maine school had a recidivism rate of 11 percent and the Colorado school had a rate of 10 percent. This ascending order of effectiveness was attributed to the degree of physical challenge and endurance found in each school's program.

The results of this study suggest that a program such as Outward Bound is a viable alternative to traditional institutional care. It was most effective for delinquents who were responding to an adolescent crisis, had their first court appearance after the onset of adolescence, returned to

homes that had both parents, and whose delinquency was directly related to home conflict.

Baer, Jacobs, and Carr (1975) evaluated the relationship between Outward Bound instructors' rating of participating juvenile delinquents and the recidivism rate after five years. The subjects were 60 male delinquents who were 16 to 18 years old, in good physical health, not mentally retarded and without severe psychopathology. All subjects were paroled at the end of the course, and successful delinquents were awarded a certificate. The investigators found that 30 percent of the campers who received a certificate were recidivists. This compared with 90 percent of those who did not receive a certificate. The results suggested that the ratings a juvenile delinquent receives after an Outward Bound performance is valuable in predicting whether he will recidivate or not. The explanation advanced by the researchers was that the intense physical challenge broke down the defenses of the juvenile delinquent so that the raters could readily observe how he responded to new challenges and rewards. Failure to receive a certificate was seen as indicative of people who adjust poorly to a new or stressful situation.

The Pennsylvania Department of Education has adapted the Outward Bound concept for the treatment of juvenile offenders. Group and Individual Growth is a highly successful out-of-doors program that consists of students who were committed to a juvenile correctional center. The participant

signs a formal contract to participate in this planned educational course that is concerned with both the cognitive and affective areas of learning. The program is 42 days in duration, and consists of four phases:

1. Orientation (7 days). These activities included clothing and room assignments, first aid, orienteering, search and rescue, and fire fighting.
2. Immersion (5 days). This phase included campcraft, orienteering, and backpacking.
3. Expedition (19 days). These activities were more demanding. They included canoeing, rapelling, and soloing.
4. Final (1 day). The activities centered around preparing for a participation in a seven day hike, a 12 mile marathon run and graduation.

After successful completion of the program, the participants were given an academic credit and released from their correctional center. Brown and Simpson (1976) attributed the success of the program to its "ability to develop sufficient character to withstand the disintegrative influences of society" (p. 46).

Collingwood (1971) detailed the specifics in developing and implementing a rugged three week camping program for 15 to 18 year old males who were also school dropouts and juvenile delinquents. The camp was an integral part of a rehabilitation agency program, and was established as a demonstration project. It was designed as a "total" program that was "therapeutic in the sense that the participants learned effective physical, intellectual and emotional interpersonal behaviors" (p. 1). Physical fitness, body

attitude, self concept, control attitudes and personality were measured by the ratings of the participants, counsellors, and parents. Pre- and post-test results of various instruments confirmed the hypothesis that a health attitude towards oneself will result from physical fitness and increased feelings of internal control over one's life. There was an overall reduction in the quantity and severity of behavior problems. With the exception of the Autism subsection, there were no personality changes as measured by the Jesness Inventory. This, the investigator surmised, was because three weeks were not long enough to effect personality changes. An increase in autism suggests the campers became more introspective and believed that they were being internally controlled. Collingwood concluded that "whether used as an intervention strategy or preferred mode of treatment, rugged camping offers implications for other problems" (p. 38).

Bailey, Drommes, Faherty, Ray and Selman (1978) described the success of the Crockett Therapeutic Wilderness Camp. The camp, designed as a remedial group treatment center for juvenile delinquents, combined the advantages of the peer group with recreation. The key element in the effectiveness of the program was the use of small groups to teach the camper how to interact with different people, control emotional outbursts and disturbances, and establish trust in other people.

An attempt to establish a wilderness camp in Northern Saskatchewan for juvenile delinquent boys was made and

reported by Armitage (1976). The success of this camp was attributed to a focus on the group was given priority to a focus on the individual, little explanation of the objectives of the program was given to the participants, and a major emphasis was placed on action-oriented challenges.

Self-Concept

The improvement of a student's poor self-concept is the usual goal of programs that are designed to modify unacceptable behavior and performance. Therapeutic camping, too, is often based on that premise. The nature of the program forces a person to judge his feelings and evaluate his self-concept. The effects of therapeutic camping on the person's self-concept, however, cannot be expected to be unidimensional.

Koepke (1973) measured the effects of the Outward Bound program on the self-concept and anxiety levels of 33 male and 11 female participants. A pretest and posttest of the Gough Adjective State-Trait Anxiety Inventory was administered to measure the real and ideal self-concepts of the campers. It was found that the participants' self-concepts became more positive and more closely approached their ideal self-concepts. Both state and trait anxieties decreased for males and females. The investigator concluded that because the direction of change was the same for both sexes, participation in an Outward Bound program had similar effects on both

sexes' state anxiety, trait anxiety, real self-concept and ideal self-concept.

The Jessness Inventory and 10 self-concept measures were administered to 60 male delinquents immediately before and after their participation in an Outward Bound program (Kelly & Baer, 1969). The delinquents were male volunteers who ranged in age from 15 to 18 years. All were in good physical health, were free from mental retardation or severe psychopathology, and had no history of violent behavior. Significant changes, reflecting more favourable social attitudes and evaluation of feelings, were found in the campers. The researchers confirmed the findings of their previous study (1968) that activity programs like Outward Bound had a positive effect upon the self concepts of juvenile delinquents in particular and adolescents in general.

Clifford and Clifford (1967) investigated the hypothesis that the experience of being challenged to the limits of one's capacities will result in increased feelings of self-worth and competence. They examined the self-rating and self-description scales completed by 36 subjects, aged 16 to 20 years, who were enrolled in an Outward Bound school. These scales also had an "ideal-self" component. They found that the ideal-self measure showed no change over time. However, the discrepancy between self-concepts and ideal-self concepts became smaller. Despite the fact that the results were not unidirectional, overall the self was viewed more positively by the Outward Bound participants. The

hypothesis was upheld even though there was no control group.

The Tennessee Self-Concept Scale was used by Rhudy (1970) to measure the change in the self-concept of a selected group of 16 males and females who participated in a non-resident Outward Bound type program. The subjects were students at the University of New Mexico and their ages ranged from 18 to 25. He found that all 10 sub-scales showed gains in the direction favouring a more positive perception of self.

A camp that consisted of 24 elementary school children was evaluated by Stroudemire and Comola (1973). The children were of average mental ability but had poor relationships with peers and parents. They exhibited such behaviors as excessive anger, depression, anxiety, and shyness. A ratio of three campers to one counsellor was used. Parents and counsellors rated the campers behaviors on the Devereux Child Rating Scale, and the campers rated themselves on the Junior Eysenck Personality Inventory before and after the camping experience. The ratings of the parents and counsellors showed no change, but for the campers there was a decrease in the neuroticism score for the group. This, the authors concluded, indicated a better self concept.

A study to determine the effects on the personalities of participants in an Outward Bound school at Keremeos, British Columbia was conducted by Jickling (1977). The participants were administered the Sixteen Personality Factor Questionnaire, test A, on the first night and test B

two nights before completion of the course. The 50 participants were divided into six patrols. He found that all patrols tended to become more warm-hearted, easy going, participating and forthright (Factor N-). This supported the contention that this Outward Bound program was effective in having a positive effect on its participants' personalities. However, the results of the 16PF revealed that personality changes varied with the patrols. On Factor E (Humble vs Assertive), four of the six patrols became more assertive; on Factor Q (Conservative vs Experimenting) three of the patrols became more conservative; and on Factor Q3 (Undisciplined vs Controlled) four of the six patrols developed more control and will power. The results indicated that Outward Bound is a worthwhile experience in producing positive effects on the participants' personalities even though it was not necessarily successful with all the patrols.

The findings of a study by Shull (1977) was the only study in the available literature sources that did not support the finding that positive personality changes occur after participation in a therapeutic camping experience. He measured the Group and Individual Growth (GIG) course that is used as an alternative to institutionalization for juvenile males, aged 15 to 18, in Pennsylvania. The Texas Social Behavior Inventory was administered to 18 people before and after their participation in GIG, and to 18 persons in a control group. Based on the findings of the pre-tests and post-tests, he reported that there was no positive increase in the

self-esteem of either group.

School Related Behaviors

Several studies described the effects on teachers after they participated in an Outward Bound program (Cole, 1976; Eder, 1976; Smathers, 1975). Cole and Eder participated to help them develop a sensitivity for fearful and unsuccessful students. Smathers compared three groups of student teachers to determine the effectiveness of Outward Bound on teacher training. He found that student teachers who participated in an Outward Bound program had a better opinion of teaching and a greater number of characteristics of good teachers such as patience and compassion than did non-participants. The other two groups remained unchanged.

Zwaig (1974) studied the effects of a camp experience on 20 learning disabled children who ranged in age from five to 15 years. Behavior programs were set up in conjunction and consultation with the school referring institution and the home. She found improvement in all children "when they were exposed to a highly structured, meaningful, and motivating experience" (p. 449).

Stimpson and Pederson (1970) studied the effects of a three week wilderness camping expedition on underachieving high school students' evaluation of themselves, their parents, and their friends. The subjects were eight male high school students recommended by a committee of teachers, counsellors, and administrators as having at least average intelligence

but were unlikely to graduate because of low achievement. The program organizers assumed that underachievement in school was caused by such factors as (a) low self-esteem, (b) conflicts in family relationships, (c) inadequate peer relationships, and (d) feelings of alienation. The program focused on these factors. Data was collected two weeks prior to the expedition and immediately after through the use of the Self and Other Rating Scale. The investigators found that evaluation of the Ideal Self, Others in General, and Best Male and Female Friend did not change significantly between the pre- and post-test scores. However, the camping experience resulted in higher evaluation of self and parents.

Adlerian Group Counseling

Adlerians contend that people have to be understood within the context of their social environment. People live in continuous social action and behave in a manner designed to attain the approval of others. People have a need to belong, to be accepted, and to be valued. Dinkmeyer, Pew, and Dinkmeyer (1979) believe that people's psychological problems are the result of disturbed interpersonal relationships. Furthermore, one's social interest and, eventually, self interest is best served through group cooperation. By becoming involved with a group, people develop a communal feeling that enhances a feeling of belonging.

Sweeny (1975), in examining the elements of groups according to Adlerian principles, viewed the participants as being inherently equal and expected to behave as such. He also maintained that people were capable of assuming responsibility for their behavior and capable of changing their attitudes and/or behavior.

Adlerians believe that groups provide the means whereby many life-long lessons are learned. Involvement in group activities will help members to believe in their capabilities, cooperate in the use of others' capabilities, and demonstrate that problems can be solved by constructive and rational means. Group members come to realize that they can use their intellect to solve problems. Also, they can be made to realize that they can gain some control over their own destiny. This is especially significant when one relates it to school achievement.

Dinkmeyer and Dreikurs, two disciples of Adler, have formulated the concepts of natural and logical consequences to teach people to behave in a positive manner even in the absence of authority figures. Natural consequences are the laws of the natural world. If you touch a hot stove you will get burned, or if you wear inappropriate clothing in the rain you will become wet. Used as teaching devices, natural consequences allow people to learn from a natural order of events. Individuals learn that they are often responsible for their behavior. Obviously, when the dangers are too great it is not possible to teach through natural consequences.

Therefore, contrived or logical consequences are used. From the experiences of logical consequences, individuals learn about the logical nature and reality of their social world. For example, if you get caught stealing from another person the logical consequence is prosecution or restitution. Through the use of natural and logical consequences a person is given the opportunity to learn from the mistakes of unpleasant consequences. The purpose is to give the person responsibility for making decisions and encourage independence. Ultimately, this will result in a stronger character.

Reality Therapy

Glasser (1965) developed a style of psychotherapy that he called Reality Therapy. According to Glasser, irresponsible behavior occurs when a person is unable to fulfill his essential psychological needs; that is, to love and be loved and to feel worthwhile to oneself and to others. The inability to satisfy one's basic psychological needs leads to the denial of reality. A person has to be taught responsible behavior through involvement with responsible people who are accepting of him; such as, peers and significant adults. The irresponsible person is guided to face reality, function responsibly, and fulfill his needs. Glasser holds that responsible behavior can be attained by all people if they are provided a chance to become involved in activities which provide themselves and others with a sense of worth and

belonging. This is best done through group activities.

Summary

The review of the literature of school dropouts suggests that the act of dropping out is caused by the interaction of a multiplicity of personal, school, and familial factors. The decision to drop out is not an isolated decision, but the culmination of a series of conditions that began early in the dropout's school history.

The body of knowledge that has been accumulated from research on the school dropout is interwoven and often interchangeable with research conducted on the potential school dropout. Using this common body of knowledge, different researchers have developed a composite index model or a statistical prediction model to predict which student will drop out of school.

This study used the following variables identified in a study by Markus (1964):

1. Extracurricular activities
2. Days absent
3. Grades failed
4. English grade point average
5. Mathematics grade point average
6. Science grade point average
7. Reading achievement

Subsequently, the literature reviewed in this section dealt predominantly with these variables.

A major drawback of the research on potential dropouts was that a disproportionate amount of research concerned itself with only the identification of potential dropouts. It is not enough to identify potential school dropouts. Once potential dropouts have been identified, a program has to be implemented to ameliorate the rate of dropping out of school.

The literature on wilderness camping was reviewed to examine the therapeutic benefits that occurred from a wilderness camping experience. Wilderness camping has been used in a variety of ways including the treatment of emotional disturbance, juvenile delinquency, and self-concept. To treat these different types of behavior a variety of different theories and techniques have been employed. Counselling approaches that have been based on Adlerian psychology and Reality therapy have proven to be successful. The results of wilderness camping research suggests that it would be feasible to use it as a programmatic approach to reduce the rate of school dropouts.

CHAPTER 3.

METHODOLOGY

The primary purpose of this study was to measure the long-term effects of a wilderness camping experience on potential dropout students. The initial step involved developing a procedure that would effectively discriminate between potential high school dropouts and potential persisters. Once a potential dropout population had been identified, a dropout prevention program, in the form of a wilderness camping expedition, was implemented.

Consistent findings from a review of the literature on school dropouts indicated that one or more of the following factors are usually associated with a student who drops out of school:

1. Extracurricular activities
2. Days absent
3. Grades failed
4. English grade point average
5. Mathematics grade point average
6. Science grade point average
7. Reading achievement

It was reasoned that if students could be identified as possessing a large number of these characteristics, it would be logical to assume that they were likely to be potential

dropouts.

Selection of Sample Population

It was decided that the potential dropouts would be identified from the male, grade nine and ten students who attended Glovertown Regional High School, Glovertown, and Gander Collegiate, Gander. Grades nine and ten were chosen because, according to dropout statistics for these two schools, they are the two grades that produce the most dropouts. Grade eleven students were deliberately omitted. To ascertain the efficacy of wilderness camping in preventing school dropouts, a sufficient length of time has to elapse. It would have been folly to have included grade eleven students when they had only one month of schooling remaining. Furthermore, the Newfoundland senior high school program has recently been reorganized and extended by one year. This had a favourable effect on this study because, theoretically, all students selected for this camping experience could be evaluated for one year longer than the older program would have allowed. Two schools were included because that was one condition on which funding was provided by the Terra Nova Integrated School Board.

It was originally intended to identify the sample population with the questionnaire devised and used by Duncan (1973) to identify potential dropouts. On that questionnaire the high school students of the Bay d'Espoir area, Newfound-

land were asked questions pertaining to their school and socioeconomic status. The critical item was number 11 which asked the students their likelihood of dropping out of school. Those students who indicated a high probability of dropping out of school were regarded as being potential dropouts. However, when the grade nine and ten students of Glovertown Regional High School and Gander Collegiate were administered the questionnaire, only a small number of students said they would likely drop out of school. Whether or not the students gave an honest revelation of their intentions, it was difficult to ascertain. Based on the knowledge of some of the students, there were many students who were the archetypal dropout. Consequently, another procedure was devised to identify potential dropout students.

English, Mathematics, and Science, besides being the academic disciplines in which most dropouts achieve most poorly, were also the three disciplines that students from both high schools studied in common. To determine which students were potential dropouts, based on the model described, the teachers of these three disciplines were asked to nominate the top five students in their classes according to each of the variables listed previously. They were also asked to list five students whom they regarded as being the most likely to drop out of school (see Appendix B).

The teachers of English, Mathematics, and Science in Glovertown were asked to nominate students in two grade nine and two grade ten classes. However, the Gander teachers

were asked to nominate students from only two of five grade nine classes and two of the five grade ten classes in Gander. The reason for the different procedures at the two schools was that the students were grouped differently in each school. In Glovertown the students are grouped heterogeneously, regardless of academic ability or achievement; in Gander they are grouped homogeneously, according to academic ability or achievement. The decision to not include the "top" three grade nine and ten classes at Gander was made because it was expected that these classes would contain relatively few potential dropouts.

A description of the total population from which the potential dropouts were selected is presented in Table 2.

Table 2
Enrollment of Male Potential Dropouts by
School and Grade

Grade	School		Total
	Glovertown	Gander	
Nine			
N classes	2	5	7
N possible	26	122	148
N actual	8	14	22
Ten			
N classes	2	5	7
N possible	31	113	144
N actual	17	8	25

Out of a possible 292 students who could have been nominated across six categories by three teachers, 59 students were nominated in at least one category. All those students who received a sufficient number of total nominations to place them above the 25th percentile were regarded as potential dropouts. This procedure yielded a sample of 47 students.

To determine which of those students identified as potential dropouts would be taken on the wilderness camping experience, six students from Glovertown and six students from Gander were assigned to the camping group (experimental group) through the process of stratified random sampling. The same procedure was used to assign 12 students to the control group.

Solicitation of Permission

Letters indicating the Board's sanctioning of the project were sent to high school principals in each high school. These letters stated the intention of the study and sought permission to offer potential dropout students an opportunity to participate in the camping program, look at the cumulative records of participating students, test participating students where necessary, and solicit the aid of school personnel to complete the potential dropout nomination scale.

The prospective campers were asked if they were interested in the venture. Their consent was followed by

a letter sent to their parents that outlined the rationale for the camping program and sought their written permission for their son to participate at no financial cost to them. The letter, in turn, was followed by a phone call, to see if further clarification was necessary (see Appendix C).

After the experimental group was selected, the Gander and Glovertown portions of the group were assembled separately. The purpose of the venture was briefly reiterated and the students' questions were answered. The students were also given a list of personal items for which they were responsible.

Selection of Camping Area

The national parks were considered as the site of the camping expedition because it was the most accessible place available that had enough of the inherent therapeutic qualities necessary to precipitate the behavioural and attitudinal changes that would be required of the campers.

Terra Nova National Park was selected because its facilities provide opportunities for a variety of venture-some activities. The numerous hiking trails and primitive campsites, both within and adjacent to the Park's boundaries, were mapped and available for use.

Terra Nova National Park, predictably, is almost all wilderness except for some semi-primitive campsites. In addition, its main campsite with its washroom facilities, cooking shelters, and playgrounds makes it an ideal base

camp. Yet, it is near enough to civilization for the group to procure provisions and use the medical facilities of the adjacent towns in the case of emergency. Equally important was the fact that the normal operations of the Park ceased between Labour Day and Empire Day. This would leave the group in relative isolation, free from the distraction of other Park visitors.

Besides the amenities previously cited, the Park provided several valuable educational experiences. It was anticipated that the curiosity of the students would cause them to take advantage of opportunities to learn about the area's flora and fauna as well as its natural and social history. Additionally, these lessons might also initiate an increased level of respect for the environment. These educational experiences, although not intended to be the main focus of the camping expedition, could be assisted by films, lectures, and guided tours by Park interpreters as well as incidental instruction by the group leaders.

Camp Program

The program was devised primarily to influence the affective education of the camper. Any academic knowledge that was attained was meant to be learned incidentally during interaction with the camp leaders and Park officials. The ultimate aim of the wilderness camping experience was to prevent the campers, all potential high school dropouts, from withdrawing from school and improve their participation in the academic and social aspects of their school.

program. However, this necessitated influencing several intervening variables since the behavior of dropping out is a manifestation of an inner emotional state and it is seldom precipitated by a specific event in time. All activities carried out during the camping expedition were designed within the context of a theoretical and philosophical base.

This camping program was the distillation of the philosophies and programs of several wilderness schools, notably Outward Bound. It became apparent that in order to evoke behavioral and attitudinal changes in the potential school dropouts, the camping experience must include benefits from both the social and physical milieu, involve activities that yield functional success, provide physical and emotional challenges, and feature a group living experience.

The camping expedition was in a broad sense an eight day group counselling session that occurred in a non-traditional setting; that is, the wilderness. The method of counselling could be described as being based on Adlerian psychology as developed by Dinkmeyer and Driekurs. It was also based on Glasser's Reality Therapy. These particular schools of thought are most compatible for use with groups because the predominant assumption is that people are best understood in relation to their social environment. By their very nature, human beings live in continuous social interaction.

Objectives and Procedures for Behavior Changes

To prevent the students from dropping out of school, a program was developed that incorporated the following objectives:

1. Initiate control until group dynamics took effect
2. Provide tasks to fulfil the campers' needs
3. Develop positive behaviors
4. Change negative behaviors
5. Encourage a revised value system

The first objective was accomplished primarily by the isolation afforded by the distance of the Park from the campers' homes. Any second doubts that the campers may have had about consenting to participate in the camping expedition were dispelled. Any thought about running away from camp was counteracted by the fear of ridicule from fellow campers for not being able to withstand adversity. Also, when there was a need, individual counselling was provided. The campers' behavior was also controlled through a prescription of activities which allowed for the elapse of time needed for the group dynamics to take effect.

From the personal observations of the counsellors and teachers in both high schools, all of the campers had unfulfilled psychological needs. Examples of such needs were to be accepted, be understood, receive and give affection, be successful, and feel worthwhile. A pivotal point of the camping program was the institution of tasks and activities

that could be mastered by all campers. The accomplishment of functional tasks demonstrated to the camper that often he could do things that he did not previously think he could do. Basically, the tasks were related to either the assignment of concrete, achievable responsibilities; such as, food preparation, or to challenges of the physical environment that required stamina, endurance and determination. Other benefits that accrued from the successful completion of these tasks were the feelings of being a member of the group, being successful, and making a worthwhile contribution to the overall welfare and success of the camping experience. The adult campers served to clarify and impress upon the other campers the benefits of such activities.

The campers were encouraged to respond to their emotions in a verbal and socially accepted manner, to become sensitive to the feelings of others, and to develop cooperative and interdependent relationships with others in the group. This was done primarily during the group meeting which occurred immediately after the completion of each evening meal. This was the one time in the day during which all campers were together. It provided an opportunity for the campers to reflect and recount the day's happenings as well as an opportunity to raise concerns. The unique social climate and atmosphere of the group that occurred as a result of 24 hour involvement of the membership made it possible to verbalize thoughts and feelings without fear of reprisals.

Such negative behaviors as hostility, impulsiveness,

egocentricity, and interpersonal manipulation could be changed because the campers were in a semi-captive situation, cut off from their normal environment. This forced them to become involved in the various activities. Peer pressure also forced them to participate. Once they were forced to "play the game" it was possible to attempt to modify their negative behaviors and beliefs. The opportunity to see the adult members of the group, representatives of an authority structure in everyday life, as fellow campers participating in the same tasks and challenges, gave a different impression of the concept of authority. Throughout the camping experiences and in the discussions the rights of others were observed. This required a continuous explanation of the rules and reasons for their expected conduct.

Groups by nature are agents that promote values and members of a group are influenced to accept certain values. Therefore, the campers were encouraged to internalize a revised value system. To acquire new values it was necessary that the campers not be judged in terms of any status they held before they joined the group. Another condition was that there be an honest revelation of feelings. The success in changing the campers' values depended upon the ability of the leader to model attentive listening, caring, and interpretation. This helped the other campers to develop better interpersonal skills.

Role of the Group-Leaders

The effectiveness of a wilderness camp as an agent for change in the camper's behavior is highly dependent upon the development of a close interpersonal relationship not only among the campers, but also between the campers and the leaders.

In the early stages of the camping experience, specifically during the group meetings, the leaders assumed most of the responsibility for keeping the group moving in a positive direction for change and growth. Therapeutic benefits did not automatically result from group meetings; they required the efforts of the group leaders. Unless guidelines for behavior were established, the experience might have become just another camping vacation. The group leaders were facilitators who attempted to create a climate that promoted growth, self-understanding, and commitment on the part of the campers. The group leaders provided guidance by providing role models. As well, they provided the technical expertise needed to make the group move toward the goal of behavior change. Besides planning the itinerary and providing the framework in which the daily activities were to take place, the importance of events that happened spontaneously were capitalized upon by the leaders in order to accelerate the progress of the group.

The nightly group meetings were governed by a set of simple ground rules:

1. Attendance was compulsory.
2. Only one person spoke at a time.
3. Each speaker was recognized by the chair before speaking.
4. A different person chaired each meeting. He was elected at the previous meeting.
5. Each member was expected to participate in the discussions.

The policy of having one of the campers act as a chairman for each meeting was instituted to facilitate cohesion among all group members, get them to assume more independence, bring out leadership qualities, and give them a different perspective on the role of authority figures. Adult leadership gradually diminished as the students became more experienced and able to analyse what had transpired in order to reach a conclusion. Even though the counsellors abdicated their status as school figures, their past experience and skill in leading groups allowed for subtle intervention and direction in keeping the discussion focused on constructive ideas.

Group Counselling Techniques

Whether done overtly or covertly, the group leaders had to assume responsibility for group growth. Provisions had to be made whereby the dynamic group processes could occur in order for the group experience to be therapeutic. This required employing the following Adlerian group counselling techniques:

1. The group meetings were structured and their purpose was communicated. This technique ensured that each group member was aware that he was a member of the group because he was a potential school dropout; therefore, they should all be sharing that concern and helping each other. This technique helped focus the discussions and it gave them meaning and purpose.

2. Interaction exercises and programs were utilized. Behavior changes did not necessarily happen by themselves in a spontaneous manner. They had to be directed and follow a plan. If group interaction is permitted to follow any course, the group becomes confused and the whole exercise becomes counterproductive. Therefore, the following of a plan maximized the time available by promoting communication, while at the same time, built group cohesion. This was accomplished through the use of various "Get Acquainted" exercises.

3. Group cohesion was facilitated by emphasizing the universalizing process that is basic to group cohesion. The campers were made to feel that they were not alone and their problems were not unique. They were made to see the similarities between each other. This generated positive feelings and helped the members view themselves as equals.

4. Here-and-now interactions were discussed. This technique is based on the belief that behavior is something that has a current purpose. What is important is being

aware of the present and the future, and forgetting the past.

5. Linking was used by the group leaders. They made it clear to the campers how their comments were related to the previous comments of another camper from the point of view of content and feeling. The comments, although stated differently, were similar. This promoted universalizing which, in turn, promoted group cohesion.

6. The group members were led to confront their behavior. This had to be done with empathy through the proposing of such tentative hypotheses as "I am thinking that perhaps" or "Is it possible that?": By using such tact, the leaders helped the group members see their behavior more clearly.

7. Blocking was used as an intervention device. When the leaders perceived some communication as being potentially destructive to the group, they intervened. This was handled diplomatically in a way that did not appear as if the leaders were rejecting the offending member.

8. Positive feedback was focused. Through this technique the leaders publicly pointed out to the rest of the group a particular member's assets. This had the powerful effect of providing positive feedback which was essential in enhancing self esteem. This was provided at every opportunity.

9. Facilitating I-messages. Group members were encouraged to facilitate I-messages by making statements about their feelings. Instead of asking potentiality antagonistic questions of a fellow group member such as "Why are you always on my back?", he was encouraged to restate it as: "I get uptight when you do that to me." This forced the group members to provide more feedback.

10. Reality testing was stimulated by paraphrasing and clarifying each statement made. By means of this technique the leaders focused on paraphrasing what the group member had just said. This helped the member to discover if he was understood.

11. The group members were offered feedback so they could modify their behavior. This required an understanding of how they were perceived by other people. Within the context of an accepting group, it was possible to give and receive feedback that was often difficult to obtain in everyday life. Once group members received this feedback they could adjust their behavior.

12. The events of the camping program were capped and summarized at the final group meeting. This was to ensure that no member was left in a state where he could not cope with his feelings. Interactions were focused on cognitive rather than emotional aspects. Each member was given the opportunity to make a final comment about what he had learned. It was a time for all members to get back in touch

with reality and prepare to return to their regular social environment.

Physical Activities

The twelve students were divided into three groups of four with two students from each school in a group. The three counsellors formed another group. Each group was responsible for preparing its own breakfast and lunch. However, the supper meal was a communal one and was prepared by each group on a rotating basis. The menus were planned in advance by the counsellors.

During the camping experience at Terra Nova National Park the campers participated in a variety of preplanned activities (see Appendix D). The activities were designed such that they increased in difficulty with each succeeding day. A climax was reached during the sixth and seventh days when the campers had to assimilate all the information and skill learned during the past six days and apply them to organizing their supplies and equipment for a 15 kilometer overnight hike. The final day was characterized as a resolution period where the campers had time to reflect upon the happenings of the past seven days, break camp, and return home.

Summary

Using seven variables that are associated with students

who drop out of school, a dropout prediction model was devised to identify 47 male, grade nine and ten, potential dropout students attending Glovertown Regional High School and Gander Collegiate. Through the process of stratified random sampling, 12 students were randomly assigned to a control group, and 12 to an experimental group. Students in the experimental group were taken on an eight day camping expedition to Terra Nova National Park with three school counsellors. The camp program was an intervention strategy to prevent the campers from dropping out of school. The program featured a variety of regular camp activities conducted in conjunction with group counselling techniques.

CHAPTER 4

ANALYSIS OF DATA

This chapter presents an analysis of the data used to test a model that attempted to discriminate between potential high school dropouts and potential graduates. To do this, two things had to be substantiated. First, it had to be determined whether the students who were nominated to participate in a wilderness camping experience, a dropout prevention program, were in fact potential high school dropouts. Second, the experimental and control groups had to be deemed comparable.

The study involved a total of 104 male, grade nine and ten students from Glovertown Regional High School and Gander Collegiate. Of these, 47 were nominated on a questionnaire administered to their English, Mathematics, and Science teachers. They, according to their teachers, were the most likely to drop out of school. These potential dropouts received three or more nominations out of a possible total of 18 (three raters across six categories). The potential dropouts were divided into the following three categories:

1. Camp - those students randomly selected and taken on a camping expedition (experimental group).
2. Home - those students randomly selected and assigned to the control group.
3. Nonassigned - those students nominated but not assigned to either the experimental or control groups.

The remaining 57 students were randomly selected from the male grade nine and ten students who were attending both high schools.

The analysis of data involved making comparisons between (1) the potential dropouts and the random sample students, and (2) the three subgroups of potential dropouts. The various groups were compared on the following variables that are frequently associated with students who drop out of school:

1. Extracurricular activities
2. Days absent
3. Grades failed
4. English grade point average
5. Mathematics grade point average
6. Science grade point average
7. Reading achievement

In instances where the differences in the means were tested by a one way analysis of variance, the probability level, $p < .05$, was adopted as the criterion for the level of significance.

Descriptive Statistics for Sample Population

The different subgroups of this study population are described in Table 3.

Table 3
Classifications of the Sample Population

Group	School			Grade	
	N	GRHS	GC	9	10
Potential Dropouts	47	25	22	22	25
(1) Camp	12	6	6	9	3
(2) Home	12	6	6	6	6
(3) Nonassigned	23	13	10	7	16
Random Sample	57	27	30	30	27
Total	104	52	52	52	52

Note: GRHS - Glovertown Regional High School
GC - Gander Collegiate

Central to the model developed to predict premature student withdrawal was student performance on a number of school and individual variables associated with dropping out of school. The potential dropouts' performance on these variables is described in Table 4. The data on the grades

Table 4
Descriptive Statistics for the Sample Population

Variable	Mean	Range	SD
Age	15.3	14-18	.96
Extracurricular activities	1.4	0-5	1.24
Days absent (1981-82)	16.2	4-56	10.61
Grades failed	.3	0-2	.58
English grade point average	56.0	13-82	12.77
Mathematics grade point average	60.2	20-94	17.47
Science grade point average	56.4	0-89	17.03
Reading achievement (grade equivalent)	7.1	4.4-9.9	10.70

failed warrants an extension of the explanation provided in Table 4. There were six students who failed two grades and 27 who failed one grade. None of the failures occurred before grade two, and apart from grade five which had no failures, the failures were spread over the remaining seven grades. Grade six, which had 21 percent of the failures, was the grade that was failed most often. Also, 64 percent of the failures were potential dropouts.

Comparison of Potential Dropout Students to
Random Sample Students

The potential dropout students were compared to the random sample students on those variables previously identified as being correlated with dropping out of school. The differences were first ascertained by means of descriptive statistics and the significance of these differences was tested by a one way analysis of variance. The comparative results are found in Table 5 for the descriptive statistics, and Table 6 for the ANOVA. It was found that the potential dropout students were different from the random sample students on each of the seven variables associated with dropping out of school. These differences were significant for extracurricular activity, days absent, grades failed, English grade point average, Mathematics grade point average, and Science grade point average ($F_{3,100} = 10.70, 18.18, 6.68, 11.65, 11.94, 10.60, p < .05$ respectively, and $F_{3,90} = 10.29, p < .05$ for reading achievement).

Each dependent variable was further analyzed by comparing the students according to their school, grade, and age. Unlike the case where the potential dropout students and the random sample students were found to be significantly different on all the dependent variables, the independent variables did not yield consistent findings. There were four instances where the school, grade, and age group of the potential dropout students and random sample students

Table 5

Descriptive Statistics for Potential Dropout Students
and Random Sample Students

Variable	Percentage of Students		Mean		S.D.	
	P.D.O.	R.S.	P.D.O.	R.S.	P.D.O.	R.S.
Age			15.6	15.0	1.06	.89
14	17.0	35.1				
15	29.8	33.3				
16	40.4	29.8				
17	6.4	1.8				
18	6.4	0.0				
Extracurricular activities			.6	1.9	.96	1.10
Days absent (1981-82)			23.0	10.5	12.08	3.97
Grades failed			.5	.1	.72	.31
English grade point average			49.5	61.5	11.39	11.29
Mathematics grade point average			50.7	68.0	17.11	13.52
Science grade point average			48.3	63.0	17.07	13.98
Reading achievement (grade equivalent)			6.5	7.8	10.84	10.56

Note: P.D.O. = Potential dropout students
R.S. = Random sample students

Table 6.

Analysis of Variance for Potential Dropout Students
and Random Sample Students

Variable	Source	df	Sum of Squares	Mean Square	F	P
Extracurricular activities	Between	3	38.58	12.86	10.70	.000
	Within	100	120.26	1.20		
Days absent (1981-82)	Between	3	4091.19	1363.73	18.18	.000
	Within	100	7500.35	75.00		
Grades failed	Between	3	5.77	1.92	6.68	.004
	Within	100	28.76	.29		
English grade point average	Between	3	4351.83	1450.61	11.65	.000
	Within	100	12450.93	124.51		
Mathematics grade point average	Between	3	8290.77	2763.59	11.94	.000
	Within	100	23143.15	231.43		
Science grade point average	Between	3	7203.87	2401.29	10.60	.000
	Within	100	22653.97	266.54		
Reading achievement (grade equivalent)	Between	3	3610.03	1203.34	10.29	.000
	Within	90	10519.68	116.89		

were significant. The students' school was significant for the variables, days absent ($F_{1,102} = 12.75, p < .05$), and English grade point average ($F_{1,102} = 7.36, p < .05$). The age of the student was significant for the variables days absent ($F_{4,99} = 2.86, p < .05$), and grades failed ($F_{4,99} = 14.41, p < .05$). The grade in which the student was enrolled was not significant for any of the variables. The variables extracurricular activity, mathematics grade point average, science grade point average, and reading achievement did not vary for school, grade or age. A discussion of the results is found in the next chapter but since the results were not central to the analysis of data in this study, the tables were placed in Appendix E.

Comparison of the Three Subgroups of Potential Dropout Students

Fundamental to the validity of this study was the establishment of the homogeneity of the three classifications of potential dropouts. The 47 potential dropouts were assigned to the Camp, Home and Nonassigned group with 12, 12, and 23 members respectively. The same procedures and variables used to compare the potential dropout students to the random sample students were again employed to compare the three groups of potential dropouts.

Table 7 provides a descriptive statistical comparison of the three groups of potential dropout students and Table 8 is an ANOVA summary of the significance of the obtained

Table 7
Descriptive Statistics for the Three Groups
of Potential Dropouts

Variables	Percentage of Students			Mean			S.D.		
	C	H	NA	C	H	NA	C	H	NA
Age				15.1	15.7	15.7	.99	.85	1.12
14	16.7	33.3	8.7						
15	8.3	25.0	43.5						
16	66.7	33.3	30.4						
17	8.3	8.3	4.3						
18	0.0	0.0	13.1						
Extracurricular activities				.42	.42	.83	.67	.67	.83
Days absent (1981-82)				25.3	21.3	22.7	14.38	12.09	11.16
Grades failed				.5	.6	.6	.80	.67	.72
English grade point average				48.4	45.7	53.0	9.05	10.85	11.90
Mathematics grade point average				50.0	45.5	53.8	15.47	15.77	18.50
Science grade point average				50.0	39.6	52.7	17.12	9.37	18.50
Reading achievement (grade equivalent)				6.6	6.7	6.4	13.90	10.90	8.37

Note: C = Camp, H = Home, NA = Nonassigned

Table 8

Analysis of Variance for the Three Groups
of Potential Dropouts

Variable	Source	df	Sum of Squares	Mean Square	F	p
Extracurricular activities	Between	2	1.97	.98	1.72	.19
	Within	44	25.14	.57		
Days absent (1981-82)	Between	2	96.85	48.42	.32	.73
	Within	44	6620.13	150.46		
Grades failed	Between	2	.09	.05	.09	.92
	Within	44	23.40	.53		
English grade point average	Between	2	662.96	331.48	2.75	.07
	Within	44	5310.79	120.70		
Mathematics grade point average	Between	2	555.10	277.55	.95	.40
	Within	44	12910.30	293.42		
Science grade point average	Between	2	1694.52	847.26	3.19	.05
	Within	44	11704.04	266.00		
Reading achievement (grade equivalent)	Between	2	51.13	25.57	.20	.82
	Within	38	4865.52	128.04		

differences. It was found that there was no significant difference between the Camp, Home, and Nonassigned groups on any of the variables associated with dropping out of school that were used in this study (extracurricular activities $F_{2,44} = 1.72$, $p > .05$ days absent $F_{2,44} = .32$, $p > .05$ grades failed $F_{2,44} = .09$, $p > .05$ English grade point average $F_{2,44} = 2.75$, $p > .05$ Mathematics grade point average $F_{2,44} = .95$, Science grade point average $F_{2,44} = 3.19$, $p > .05$ respectively, and $F_{2,38} = .20$, $p > .05$ for reading achievement).

Replicating the procedure used to compare the potential dropout students to the random sample students, the three groups of potential dropout students were compared by school, grade, and age. There were three instances where the variables were significant. The students' school was significant for the variable, English grade point average ($F_{1,45} = 9.58$, $p < .05$). The grade in which the student was enrolled was significant for the variable, Science grade point average ($F_{1,45} = 4.68$, $p < .05$). The age of the student was significant for the variable, grades failed ($F_{4,42} = 5.75$, $p < .05$). A more detailed comparison is provided by the tables in Appendix F.

Summary

The data analysis attempted to determine that there was a significant difference between the 47 potential dropout students and the 57 random sample students. It also

endeavoured to establish that there was no significant difference between those potential dropout students designated as Camp (experimental group), Home (control group), and Nonassigned. Identical procedures were used to compare the various groups on seven variables associated with dropping out of school. Comparisons were first made through the use of descriptive statistics, and the differences were tested by an ANOVA. The potential dropout students differed significantly from the random sample students on all variables; the three groups of potential dropouts did not differ significantly on any of the variables. Therefore, there was support for the hypothesis that the potential dropout students were significantly different from the random sample students. The hypothesis that there was no significant difference between the three groups of dropouts was also supported.

When each of the variables associated with dropping out of school was further analyzed according to the school, grade, and age of the students, there were some unanticipated results. There were instances in both sets of comparisons where the school, grade, and age of the students was significant. This does not invalidate the model developed in this study. The viability of the model depended primarily upon its effectiveness in discriminating between potential dropout students and randomly selected students, and in establishing the homogeneity of the three groups of potential dropouts. The potential dropout students differed significantly on all seven variables frequently associated

with school dropouts, and there was no significant difference between the three groups of dropouts. Also, a sufficient number of explanations are advanced in the next chapter to account for the incongruent findings of the three independent variables.

CHAPTER 5

DISCUSSION

Conclusions

To reduce a schools' dropout rate, it is first necessary to accurately predict which students are likely to drop out of school. Secondly, an effective dropout prevention program has to be implemented. This study attempted to address both these conditions. One hundred and four students were used to establish a screening device that would identify potential dropouts. Twelve of the students identified as potential dropouts participated in a wilderness camping program that was designed to reduce their dropout proneness. A discussion of the results obtained from both procedures follows.

Dropout Prediction Results

The 47 grade nine and ten students from Glovertown Regional High School and Gander Collegiate who were nominated as potential dropouts by their English, Mathematics and Science teachers were compared to 57 students randomly selected from the same grades and schools. Descriptive statistics and an ANOVA were used to determine if there was a significant difference between the two groups of students on variables frequently associated with dropout students. The two groups of students were significantly different on

all seven variables.

The potential dropout students and the randomly selected students were compared further by analyzing each of the seven variables according to the school, grade, and age of the students. The independent variable, school, was significant for the variables: days absent, English grade point average, and reading achievement. The age of the student was significant for the variables: days absent, grades failed, and reading achievement. The grade in which the students were enrolled was not significant for any of the seven dependent variables.

Glovertown students had an higher absentee rate than did the Gander students. The mean difference of 7.1 days was significant ($F_{1,102} = 12.75, p < .05$). This discrepancy reflected a difference in policy by the administrators of both high schools. In the past, Gander Collegiate had a severe truancy problem. To counteract this problem it enacted a more stringent attendance policy than that operating at Glovertown Regional High.

The grade nine and ten students of English at Glovertown obtained higher marks than did their counterparts at Gander. They scored an average of 59.35 and 52.75 percent respectively which was found to be significant ($F_{1,102} = 7.36, p < .05$). No apparent explanation for this difference could be provided. It would be premature to conclude that the Glovertown students were better students of English than were the Gander students, or that the Glovertown teachers were

more adroit in the teaching of English than were the Gander teachers. Perhaps, it reflected a difference in the evaluation procedures of both schools.

Students in this study ranged in age from 14 to 18 years. The mean absentee rate for these age levels varied significantly from 12.8 days for the 14 year olds to 28.3 days for the 18 year olds ($F_{4,99} = 2.86, p < .05$). A pattern emerged which depicted an absentee rate that increased with each corresponding age level. It appeared that the older students missed more school than did younger students.

Perhaps axiomatically, there was a direct correspondence between the age of the student and the fact that they had failed a grade. The mean rate of failure increased significantly with each corresponding age level ($F_{4,99} = 14.41, p < .05$). There were 33 instances of grades failed. The 14 year olds did not fail any grade, but the 18 year olds failed an average of 1.67 grades.

The same procedure used to establish the heterogeneity of the potential dropout students and the random sample students was used to establish the homogeneity of the three groups of potential dropout students. There was no significant difference between the three groups on any of the seven variables associated with dropping out of school. But again, the independent variables, school, grade, and age disclosed significant differences. For the potential dropout students, their school was significant for the variable, English grade point average; their grade was significant

for the variable, science grade point average; and their age was significant for the variable, grades failed.

Potential dropouts who attended Glovertown Regional High obtained higher marks in English than did their counterparts at Gander Collegiate. Their respective scores of 53.9 and 44.5 percent differed significantly ($F_{1,45} = 9.58$, $p < .05$). This result was similar to that noted above for this variable where potential dropout students were compared with random sample students. Again, no explanation can be provided to account for the difference in the scores.

Grade ten potential dropout students obtained higher marks in science than did the grade nine students. The grade nine students achieved 42.8 percent compared to 53.2 percent for the grade ten students, and this difference was significant ($F_{1,45} = 4.68$, $p < .05$). However, no valid reasons were found to explain the discrepancy between the scores.

The only independent variable for which the age of the potential dropout student was significant was grades failed. The mean rate of failure increased consistently with each age level, ranging from a low of no grades failed by the 14 year olds to a high of 1.7 grades failed by the 18 year olds. Predictably, these differences were significant ($F_{4,42} = 5.74$, $p < .05$). It was unlikely that any of the 14 year olds had failed a grade since 14 is the normal age for grade nine students. Conversely, students 15 years of age are above age for grade nine and students 16, 17, and 18 years of age are above age for grades nine and ten.

Wilderness Camping Results

It is difficult to empirically demonstrate and quantify all the therapeutic benefits that accrued from the camping experience. One had to be a part of the group and witness firsthand the subtleties, nuances, and the intricate types of behaviors that occurred as the group processes unfurled. They produced a "gut feeling" that many positive things had happened. Such feelings are not easily verbalized. The intensity and total involvement of living together with a group of people, often under difficult conditions, melted many differences and welded the group together. Such instances as observing the cooperative effort of one group constructing a shelter to escape the unmerciful rains, another group preparing supper, and then the whole group quietly spending the remainder of the night playing cribbage and backgammon was a moving experience. This was in sharp contrast to several hours previous when the whole group was split into three factions and almost came to blows in trying to decide whether or not to hike for two hours in the rain to set up another camp.

During the last group meeting, which was devoted to reflection upon the past week's happenings, all but one camper and all three "leaders", said it was a worthwhile experience. The majority of the positive comments that were expressed were related to improvements in interpersonal relationships. The campers frequently cited the fact that they had become more aware of the need to get along with

each other.

The only general negative comment was that the group leaders should have been more directive; i.e., more like school officials that would tell students what to do. This idea was counter to the philosophy of the camp because the campers were supposed to learn more positive behaviors through discussion and through attainment of consensus. The impression among some campers that the leaders were authority figures at school and therefore had to maintain that role was never fully dispelled, even though the setting and conditions were different.

There were several instances where the campers expected the leaders to react in an authoritarian manner. The most poignant example occurred after an eight kilometer hike to Ochre Hills. Four of the campers maintained that they were not going to walk back but cut through the woods and hitch-hike back to base camp. The fact that this action would put the leaders in a liable position if they met with misfortune was explained. As well, they were reminded that this was an irresponsible type of behavior. They agreed to comply but deceitfully slipped through the woods to the highway. However, they were unsuccessful in obtaining a ride and ended up walking back to camp. In addition, one of the hitch-hikers decided to hitch-hike home. Sometime later, he was delivered to the camp by a Park warden who found him wandering around in another campsite, lost. His fear of ridicule from his peers for not being able to

persevere was so great that it compelled him to return to camp.

These incidents caused the camp to be riddled with comments and anticipation as to how the leaders were going to react at the nightly meeting. Purposely, nothing was done, or said. It was reasoned that by keeping the campers in suspense, it gave them time to ponder their actions. It was further reasoned that doing the unpredictable, not reacting in the normal authoritarian way, would give credence to the philosophy espoused that solutions to problems can be attained without the use of power.

As effective as the perceived outcome of the camping expedition was, there were factors that militated against an even more positive effect. These factors were the

1. Differences between the campers' home communities.
2. Range in the campers' behavior.
3. Inadequacies of Terra Nova National Park in comparison to Gros Morne National Park.
4. Timing of the camping expedition.

The campers came from two separate communities, each quite different in demography. Gander is an urban center whose population is more cosmopolitan and transient, and whose socioeconomic classes are predominantly middle and upper class. Glovertown is a rural community whose population is more homogeneous. With a small industrial base, a large segment of the population subsists on unemployment insurance and social assistance. At first, the Glovertown

students tended to view the Gander students as being ignorant of campcraft and unable to cope with the rigors of the camp. The Gander students tended to view the Glovertown students as being socially beneath them. Unfortunately, given the relatively short amount of time to be together, it took too much valuable time to eradicate these counterproductive views that lessened group cohesion. A homogeneous group would be more likely to quickly move in a positive direction.

All the campers were deemed potential dropouts. This term covered a wide range of behaviors, and, as a consequence, there were too many different types of students included in the group. Such behaviors as immaturity, withdrawal, social and economic deprivation, juvenile delinquency, and emotional disturbance were characteristic of the group. With the omission of emotionally disturbed students, the group would have functioned much better. The emotionally disturbed students took up a disproportionate amount of counselling time and blended least with the group. This observation is consistent with the findings of Kelly and Baer (1969) who made a stipulation for their groups that people who were judged to be psychopathological should not be included. However, Garlie and Hoxworth (1970) found that emotionally disturbed students could be integrated into the group. A longer camping program or the inclusion of "normal" students to act as role models may have produced a different finding. Extenuating circumstances dictated that the camping expedition take place in the spring in Terra Nova National

Park rather than in the fall in Gros Morne National Park as was originally planned. This change in venue and time proved to be detrimental. Terra Nova National Park was not as suitable as Gros Morne because it did not have as much variety in types of terrain. This limited the number of different types of activities that students could do, and hence reduced the camp's effectiveness. Kelly and Baer (1971) made a similar observation when they found that the Outward Bound school in Colorado, with its mountains, was more effective in preventing juvenile delinquency than the one in Minnesota which had only undulating hills and lakes. Also, Terra Nova was too near the campers' homes to give a full sense of isolation. There was a constant fear that if some of the campers became too disenchanted, they would hitch-hike back home. However, this fear was counteracted to a degree by the powerful force of peer pressure. When several of the boys threatened to return home, they were taunted by the others that they were weak and could not take the pressure. To the "macho" campers, as some of them perceived themselves as being, this was the ultimate blow to their egos. However, this fear was a haunting one and kept the camp leaders more ill-at-ease than should have been the case.

The change in the scheduling of the camping expedition from September to May affected the immediacy and timing of obtaining measures of the campers' behaviors. Because of the time restraints placed on the writer, it was necessary

that this study be a longitudinal one with measures obtained at the end of three successive school years. Also, for all intents, the school year was all but completed when the campers returned to school. It would have been more desirous if the camp were held at the beginning of the school year because many of the positive effects could be continuously reinforced and improved throughout the school year. Instead, it is possible that some of the positive effects may have diminished over the summer vacation.

Recommendations for Further Study

Recommendations resulting from this study are listed under two categories. The first category suggests five possible routes of research based on the model developed for this study. The second category offers 12 suggestions that could be used to improve wilderness camping as a dropout prevention strategy.

Dropout Prediction Model

1. The same procedure used to identify male grade nine and ten potential dropouts should also be replicated for (a) females at the same grade levels, (b) males in grades seven and eight, and (c) females in grades seven and eight.

2. The dropout literature delineates three categories of reasons why students drop out of school. This study drew

its dependent variables from two categories, personal reasons and school related reasons. Another model should be developed that uses the third category, socioeconomic reasons.

3. There were 59 students who were nominated at least once as a potential dropout for the purposes of this study. The 25th percentile was used as a cut-off point to separate high-risk from low-risk, potential dropouts. A lower percentile such as the 20th could be used to see if it is as effective in discriminating between high- and low-risk, potential dropouts.

4. A study by Duncan (1973) used a questionnaire in which students nominated themselves as potential dropouts. This questionnaire was originally adapted to select students for this study but it proved to be ineffective. This same-questionnaire could be tried again or another one could be devised and validated as a device to identify potential dropouts to take camping.

5. Perhaps it is axiomatic, but schools should be encouraged to insure that cumulative records are accurate and contain current data. This is essential for developing models to identify potential dropouts.

Wilderness Camping Program

1. The camping expedition should occur in a setting that is a considerable distance from the camper's homes.

Distance from home has both a psychological and physical effect upon the camper. Psychologically, camping removes the camper from a milieu that aggravates their problems and symbolically it represents a fresh start. Physically the greater the distance from home, the less will be the inclination to run away from camp when adversity is encountered.

2. The most practical time to conduct a camping program, using conventional camping equipment, is early Fall. In Newfoundland, a climatic zone where there is little consistency in the seasonal weather patterns, Fall is the season which allows for the most accurate, long range weather forecasting. Also, unlike Spring where time at school is critical because students are facing impending final examinations, time away from school during early Fall is not as critical. Another reason is camping in the Fall allows for follow-up counselling sessions at school throughout the remainder of the school year. These sessions can serve to strengthen any positive behaviors incurred during the camping experience and circumvent any disintegrative or disruptive forces that may be impinging upon the former camper. This is a more powerful procedure than allowing the summer holidays to intervene between the camping experience and follow-up counselling sessions.

Finally, if Gros Morne Park is used, early Fall would be the most appropriate time because toward the end of September it is quite normal to have snow. In years of heavy snowfall the mountains are still covered with snow

in Spring. This would make the camping trip more dangerous, and would require the use of more specialized camping equipment.

3. The initial planning and selection of students for the proposed camping program should be completed before the final six weeks of school. Not only does this allow sufficient time to make contacts with parents and some non-school agencies, such as the National Parks and Social Services, it allows for the holding of several orientation meetings with the prospective campers. These meetings should be used to (i) explain the purpose(s) of the camping expedition, (ii) give a list of items for which they would be responsible, (iii) state how the camp is to be organized, and (iv) teach such skills as first aid, compass, and basic campcraft. The orientation sessions should culminate with a weekend expedition in late May or early June to serve as a practical application of what they have learned. This weekend expedition would serve the purpose of uncovering some difficulties, such as, some of the campers having inappropriate equipment. It would also help the group to become cohesive and it would maximize the time available for the real camping expedition.

4. It could perhaps be argued that the most dramatic behavior changes will occur in a wilderness area that is totally isolated and devoid of any of the influences of civilization. However, total isolation spawns problems. The solutions to these problems would make camping either

financially onerous for the school board or increase the legal liability of the camp organizers. Such problems as gaining access to isolated areas require specialized, expensive modes of transportation such as aircraft or all-terrain vehicles. Another problem would be access to medical facilities in the event of emergency. An acceptable compromise is the use of the National Parks.

5. The camping expeditions should aim at a minimum of two weeks in duration, in addition to the orientation program recommended earlier. This prescribed length of time is necessary to insure group cohesion. Group cohesion is essential if positive behavior change is to occur.

6. Group cohesion and a maximized use of time can be enhanced if the campers come from only one school. Too much valuable time can be lost in dispelling community rivalries and initiating "getting acquainted" activities.

7. School boards should recognize wilderness camping as a valuable educational experience for a variety of the students within its jurisdiction. Further, perhaps in conjunction with the physical education program, boards should endeavour to build a bank of essential equipment, such as tents, canoes, and cooking utensils.

8. Wilderness camping for girls should be attempted. There is a scarcity of information on the effects of wilderness camping on girls. Besides being potentially

valuable for girls, as it appears to be for boys, it would help generate some much-needed research on female, potential dropouts.

9. The Newfoundland Department of Education should recognize as inservice the time that schools' personnel spend with students at camp. This would enable the school to hire substitute teachers to cover the teachers' classes while they are at camp. This would eliminate the necessity of having colleagues cover the classes.

10. In Newfoundland, where financially feasible, Gros Morne National Park is preferable to Terra Nova National Park because its terrain will enable a greater variety of activities for the campers.

11. Emotionally disturbed students should not be included in a camp of less than two weeks duration because they consume a disproportionate amount of time. They also take longer to become cohesive with the rest of the group. It might be desirable to have a camp exclusively for emotionally disturbed students.

12. "Normal" students should be included in the camping group. This would perhaps have a positive effect, especially on emotionally disturbed students. It was tried in the forerunner to the expedition under study and appeared to be a successful strategy.

CHAPTER 6

SUMMARY

Description of the Problem

A decline in school enrolments, coupled with an increase in the attrition rate, are the reality of today's budget cutting, educational scene. As for the former, there is not much control that school personnel can exercise. However, in the case of the latter, with some imagination and a willingness to go beyond traditional approaches, such as, altering the school curriculum to prevent school dropouts, the situation can be improved. While the study of dropouts has generated much research during the past 80 years, the field of identifying and preventing potential dropouts from dropping out of school is still in its infancy, and it requires more constructive thought and analysis. Counsellors, in particular, and other school personnel, in general, must try to improve the holding power of their schools. In doing so:

We can make education a more valid and worthwhile experience for more of our students, with the end result that they will stay in school longer and leave better prepared. (Morris, 1982, p. 54)

The dropout studies that were conducted in Newfoundland paralleled those conducted elsewhere in North America. The magnitude of the dropout problem, the characteristics of

dropouts, and the tremendous waste of human potential were described, but Newfoundland researchers failed to prescribe and implement prevention programs.

Elsewhere, typical dropout prevention programs that were implemented consisted of modifying the school curriculum or instituting work study programs. The literature on these types of programs reports various degrees of success. It was the contention of this study that while these dropout prevention programs served a useful purpose, they were a reaction to the unacceptable behaviors of potential dropouts rather than an attempt to modify the behaviors that were acting upon the student and leading to his/her possible withdrawal from school. In instances where attempts were made to modify the behavior through counselling, it was done in a school setting. This approach was often ineffective and/or counterproductive because the student was still surrounded by the same conditions that caused his/her undesirable feelings about school.

It became apparent that in order to increase the effectiveness of a dropout prevention program several intervening variables had to be affected because the act of dropping out of school resulted from the interplay of many complex behaviors. Dropping out of school is seldom precipitated by a specific event in time. Behavior change had to occur which would result in improving the potential dropouts' participation in the academic as well as the social aspect of schooling. These changes could be most

effectively wrought in a milieu that was removed from the influence of those factors that typically resulted in the student dropping out of school. It was further reasoned that, under the tutelage of several counsellors, a sojourn in the wilderness with a group of other potential dropouts might be an appropriate place to initiate a change in their behavior, their opinion about themselves and others, and their attitude towards school.

This course of action was chosen as a dropout prevention technique because the use of wilderness camping as an effective psychotherapeutic technique has been convincingly and eloquently documented. Wilderness camping contains many of the elements needed to alter behavior. The wilderness tends to have a calming, settling effect upon the campers and removes them from the source of their problems. Isolation forces a dependence upon their survival training and a reliance upon group cohesion. Activities are such that functional success is achieved by all campers. Problem solving opportunities are provided and decisions have to be made. These decisions are related to physical needs that cannot be postponed because they will cause the camper some discomfort.

Research Methodology

Consistent findings from a review of the literature on school dropouts have indicated that the following

variables are frequently associated with a student who drops out of school: (1) extracurricular activities, (2) days absent, (3) grades failed, (4) English grade point average, (5) Mathematics grade point average, (6) Science grade point average, and (7) reading achievement.

The grade nine and ten English, Mathematics, and Science teachers of Glovertown Regional High and Gander Collegiate were administered a questionnaire which asked them to list the top five students in their class who scored the lowest on each of the five variables associated with dropping out of school. Using the 25th percentile as a minimum cut-off point, 25 students from Glovertown and 22 from Gander were nominated as potential dropout students.

Through the process of stratified random sampling, six potential dropout students from Glovertown and six potential dropout students from Gander were assigned to the experimental group--those who were taken camping. Also, six potential dropouts from each school were assigned to the control group--those who received no treatment.

During the camping experience at Terra Nova National Park, the campers participated in a range of preplanned activities. While capitalizing upon the uniqueness of the wilderness and the therapeutic benefits that are contained in it, group counselling procedures were attempted in combination with regular camping activities. The activities were designed such that they increased in difficulty with each succeeding day. The first two days were devoted to

orientation to the Park, getting acquainted with fellow campers, and basic camp craft. A climax was reached during the sixth and seventh days when the campers had to assimilate all the information and skill learned during the past six days and apply them to organizing their supplies and equipment for a 15 kilometer overnight hike. The final day was characterized as a resolution period where the campers had time to reflect upon the happenings of the past seven days, break camp and return home.

The camping expedition was really a group counselling session that occurred in the wilderness. Consequently, most of the activities at camp were devised in the context of counselling theories. The counselling techniques and camp philosophy were based on Adlerian psychology and Glasser's Reality Therapy. These two schools of thought were adopted because they are based upon the assumption that people are best understood in relation to their social environment.

Most of the counselling occurred during the nightly group meetings. It was during these sessions that the expression of concerns and feelings was encouraged. It was the medium whereby the leaders, both directly and indirectly, attempted to shape the group. Positive behaviors that occurred during the day were always noted as each session ended. These meetings were the heart of the camp program; a forum and a vehicle for altering undesirable behavior and replacing it with more acceptable behavior. However, there were instances during the day when a group leader

called a camper aside to discuss some inappropriate behavior that was exhibited.

Evaluation of the Findings

The data collected from this study represented the first two phases of a longitudinal study. These two phases were: (1) develop a model to identify potential high school dropouts, and (2) implement a wilderness camping program as a dropout prevention device. Subsequently, these two phases yielded two different types of data. In the case of the former, the data was empirical, quantifiable and objective; whereas the data from the latter was based predominantly on personal observations and impressions.

To establish a statistically viable model that effectively discriminated between potential high school dropouts and potential graduates, it was necessary to answer the following two questions:

1. Did the 47 grade nine and ten male students nominated as potential high school dropouts differ significantly from a random sample of 57 students drawn from the same student population?

2. Was there a significant difference between the three groups of potential dropouts?

To answer these two questions the different groups were compared on the seven previously identified variables that

were recurrent in the literature on school dropouts.

The data were analysed first by comparing the different groups by the use of descriptive statistics. Secondly, inferential statistics in the form of one-way analyses of variance were used to test the significance of the mean differences. The results demonstrated that for each variable the potential dropouts were significantly different from the random sample students, and the three groups of potential dropouts were not significantly different.

It was more difficult to measure the results of the camping experience. Based on personal observations during and after the camping experience, it was possible to conclude that many positive things had happened to the campers. That impression was supported by the campers who maintained that they thought it was a worthwhile experience, especially in helping them become more aware of the need to get along with each other. However, the validity of these impressions will be substantiated or refuted over the next three years.

Conclusion

The potential dropout screening procedures identified a group of students that differed significantly from a group of students randomly selected from the population of students. The identified students were randomly assigned to either a dropout prevention treatment group or a control group. The treatment, a group counselling, wilderness

camping program, was effected. Both the experimental and control groups will be monitored for the next three years to determine if the students identified by the screening procedures were potential dropouts, and if the dropout prevention program was effective.

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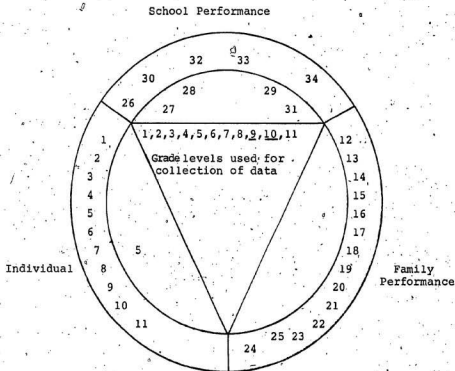
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APPENDIX A

Adaptation of Markus' Model of Variables Associated with School Dropouts



Note: Numbers in the inner circle represent the variables selected for this study.

Code for variable numbers is presented on the following page.

Figure 1. Adaptation of Markus' model of variables associated with school dropouts.

Individual Performance

1. sex
2. overageness
3. language difficulty
4. I.Q.
5. Reading ability
6. Peer group affiliation
- 7.. Interest and aspirations
8. Physical health
9. Social adjustment
10. Personal adjustment
11. Marriage

Family Performance

12. Parents occupation
13. Source of income
14. Residence
15. Area of resident
16. Parents education
17. Amount of income
18. Racial background
19. Parents marital status
20. Parent-school attitudes
21. Parent-child relations
22. Family mobility
23. Family size
24. Residents at home
25. Siblings' success

School Performance

26. Grades, Elem & H.S.
27. Failures, Elem & H.S.
28. School achievement
29. Extracurricular activities
30. Citizenship
31. Attendance
32. Tardiness
33. Retardation in school
34. Leadership qualities

APPENDIX B

Teachers' Questionnaire

TEACHERS' QUESTIONNAIRE

To The Teacher:

I am a student at Memorial University. My thesis necessitates that I gather information about some of the students within the Terra Nova Integrated School Board. I would greatly appreciate it if you would help me by filling in this questionnaire. Please be assured that all of your answers will be treated with the strictest of confidence.

Yours truly,

Please list the names of FIVE male students in your course who have:

1. The lowest reading level

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

2. Generally scored the lowest marks

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

3. The poorest attendance record

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

4. Repeated at least one grade including their present grade

a. _____
b. _____
c. _____
d. _____
e. _____

5. Participated in the least number of extra-curricular activities

a. _____
b. _____
c. _____
d. _____
e. _____

6. Indicated a likelihood of dropping out of school

a. _____
b. _____
c. _____
d. _____
e. _____

THANK YOU FOR YOUR COOPERATION

APPENDIX C

Solicitation of Parents' Consent

May, 1982

Dear Parent (s):

This year the Terra Nova Integrated School Board, in its attempts to meet as many of the educational and personal needs of its pupils as possible, is trying a new project. This project involves a wilderness camping and hiking experience at Terra Nova National Park and involves twelve male students from Glovertown Regional High School and Gander Collegiate. It will be conducted under the auspices of Gerald Smerdon, educational psychologist with the Board, and supervised by Terry Hollett, from Gander Collegiate, Wayne Chaulk and myself from Glovertown Regional High School, and officials of T.N.N.P. The camping experience will cover the period from May 13 to May 21. If it proves to be successful, a similar venture will take place next year and also in other parts of the School Board District.

Your son, _____, has been asked, at no cost to him, to participate. All expenses and equipment, except for personal belongings, will be provided by the Board and the organizers.

Apart from the fact that the camping experience will provide your son with an experience that many boys hope for--an opportunity for adventure and exploration in the out-of-doors, it will also attempt to teach him many of the things that are difficult to teach in a normal school setting. Some of the anticipated benefits fall into two categories.

1. Social and Personal Benefits

- a. Encourage self reliance and decision making by having to depend upon his skills when faced with such challenges as preparing meals and managing his personal belongings, often under difficult decisions.
- b. Improve his ability to socialize and cooperate with other people.
- c. Encourage positive feelings about himself and other people.
- d. Improve his ability to express and deal with personal feelings.
- e. Learn coping and problem solving skills.
- f. Promote a sense of responsibility, trust, self discipline and achievement.
- g. Establish lasting friendships with other members of the group.

2. Educational Benefits

- a. Promote a greater knowledge of the geography, geology,

- 2 -

and natural history of the area through the use of lectures and films by Park officials, informal discussions with the teachers in the group, and by first hand observation.

- b. Increase his knowledge of maps and compasses, first aid and other wilderness survival techniques.
- c. Encourage an awareness of and respect for plant and animal life and the total environment.
- d. Gain confidence in his ability to express himself orally and on paper as he talks about his experiences.
- e. Get a positive outlook towards school and education.

I would like to stress that you are in no way obligated to let your son go on this trip! However, it is felt that your son could certainly benefit from the trip and make a substantial contribution to the success of the project. In order for him to come along, it is necessary that we have your consent. You can indicate your decision by signing the appropriate line at the bottom of this letter. If you give your consent, a list of the necessary items your son will need will be sent home to you.

If you need further explanation, please call either the following people

Gerald Smerdon, School Board, 256-4292/4324/7377
Terry Hollett, Gander Collegiate, 256-2581/2582
Wayne Chaulk, Glovertown Regional High, 533-2443/2542
Kirk Goulding, Glovertown Regional High, 533-2443/2542

____ Yes, I give my consent

Signature

____ No, I refuse to give my consent

Signature

Yours truly,

Kirk Goulding
Guidance Counsellor

APPENDIX D

Itinery and Schedule of Activities

Itinerary and Schedule of Activities

- Day 1 - Thursday Arrive at Park (Newman Sound Campsite).
Set up camp. Exploration of the
immediate area. Prepare supper. Soccer
and/or softball. Group meeting.
- Day 2 - Friday Basic survival techniques. Map and com-
pass work. First aid. Visit the
visitors' center for slide presentation.
Litter blitz. Short interpretation walk
after supper. Group meeting.
- Day 3 - Saturday Morning - Demonstration of fire fighting
techniques and equipment by Park warden.
Afternoon - Hike to Buckley's Cove and
back, fishing along the way. Soccer and/
or softball. Group meeting.
- Day 4 - Sunday Hike to Bread Cove Pond via Ochre Hills
and return. Group meeting.
- Day 5 - Monday Hike to Sandy Pond for canoeing demon-
stration and practice. Return home.
Soccer and/or softball. Group meeting.
- Day 6 - Tuesday Hike to South Broad Cove for overnight.
Group meeting.
- Day 7 - Wednesday Return to base camp at Newman Sound.
- Day 8 - Thursday Leisure. Group meeting. Break camp
and return home.

APPENDIX E

Comparison of Potential Dropout Students and Random
Sample Students by School, Grade, and Age

Table 9

Comparison of Sample by School

Variable	School	N	Mean	S.D.
Extracurricular activities	G.R.H.S.	52	1.42	1.43
	G.C.	52	1.36	1.03
Days absent (1981-82)	G.R.H.S.	52	19.67	12.39
	G.C.	52	12.63	6.97
Grades failed	G.R.H.S.	52	.27	.56
	G.C.	52	.37	.60
English Grade Point Average	G.R.H.S.	52	59.35	9.48
	G.C.	52	52.75	14.74
Mathematics Grade Point Average	G.R.H.S.	52	58.52	18.24
	G.C.	52	61.92	16.67
Science Grade Point Average	G.R.H.S.	52	57.21	15.80
	G.C.	52	55.50	18.27
Reading Achievement (Grade Equivalent)	G.R.H.S.	48	70.25	12.33
	G.C. *	46	74.56	12.32

Note: G.R.H.S. = Glovertown Regional High School
 G.C. = Gander Collegiate

Table 10

Analyses of Variance for Sample by School

Variable	Source	d.f.	Sum of Squares	Mean Square	F	p
Extracurricular activities	Between	1	.09	.09	.06	.810
	Within	102	158.75	1.56		
Days absent (1981-82)	Between	1	1288.04	1288.04	12.75	.000
	Within	102	10303.50	101.02		
Grades failed	Between	1	.24	.24	.72	.340
	Within	102	34.29	.34		
English grade point average	Between	1	1131.24	1131.24	7.36	.008
	Within	102	15671.52	153.64		
Mathematics grade point average	Between	1	301.24	301.24	.99	.323
	Within	102	31132.67	305.22		
Science grade point average	Between	1	76.16	76.16	.26	.611
	Within	102	29781.67	291.98		
Reading achievement (grade equivalent)	Between	1	437.40	437.40	2.64	.121
	Within	92	15253.00	165.79		

Table 11

Comparison of Sample by Grade Level

Variable	Grade	N	Mean	S.D.
Extracurricular activities	9	52	1.32	1.25
	10	52	1.46	1.24
Days absent (1981-82)	9	52	14.94	8.93
	10	52	17.37	12.02
Grades failed	9	52	.31	.54
	10	52	.33	.62
English grade point average	9	52	55.27	13.28
	10	52	56.83	12.33
Mathematics grade point average	9	52	61.48	16.78
	10	52	58.96	18.21
Science grade point average	9	52	55.69	16.98
	10	52	57.02	17.21
Reading achievement (grade equivalent)	9	50	71.88	14.16
	10	44	72.90	11.55

Table 12

Analyses of Variance for Sample by Grade Level

Variable	Source	d.f.	Sum of Squares	Mean Square	F	P
Extracurricular activities	Between	1	.47	.47	.30	.810
	Within	102	158.37	1.55		
Days absent (1981-82)	Between	1	152.65	152.65	1.36	.246
	Within	102	11438.89	112.15		
Grades failed	Between	1	.01	.01	.03	.867
	Within	102	34.52	.34		
English grade point average	Between	1	63.09	63.09	.38	.537
	Within	102	16739.67	164.11		
Mathematics grade point average	Between	1	165.01	165.01	.54	.465
	Within	102	31268.90	306.56		
Science grade point average	Between	1	45.78	45.78	.16	.693
	Within	102	29812.06	292.28		
Reading achievement (grade equivalent)	Between	1	87.10	87.10	.51	.473
	Within	92	15857.62	172.37		

Table 13

Comparison of Sample by Age Group

Variable	Age	N	Mean	S.D.
Extracurricular activities	14	28	1.46	1.17
	15	33	1.73	1.35
	16+	43	1.17	1.24
Days absent (1981-82)	14	28	12.82	7.14
	15	33	14.55	8.71
	16+	43	20.96	8.23
Grades failed	14	28	0.00	0.00
	15	33	.21	.42
	16+	43	1.12	5.78
English grade point average	14	28	59.18	11.93
	15	33	54.36	15.11
	16+	43	52.12	9.65
Mathematics grade point average	14	28	64.82	17.42
	15	33	58.67	18.09
	16+	43	56.38	12.88
Science grade point average	14	28	58.21	19.14
	15	33	56.03	18.83
	16+	43	53.67	10.13
Reading achievement (grade equivalent)	14	28	70.03	9.42
	15	33	70.43	12.94
	16+	43	65.32	8.14

Table 14

Analyses of Variance for Sample by Age Group
on Dropout Associated Variables

Variable	Source	d.f.	Sum of Squares	Mean Square	F	P
Extracurricular activities	Between	4	9.16	2.29	1.52	
	Within	99	149.68	1.51		.200
Days absent (1981-82)	Between	4	1202.19	300.55	2.86	
	Within	99	10389.35	104.94		.027
Grades failed	Between	4	12.71	3.18	14.41	
	Within	99	21.82	.22		.000
English grade point average	Between	4	1006.38	251.59	1.76	
	Within	99	15796.38	159.56		.186
Mathematics grade point average	Between	4	1106.83	276.71	.90	
	Within	99	30327.08	306.33		.465
Science grade point average	Between	4	365.99	91.50	.31	
	Within	99	29491.85	297.90		.873
Reading achieve- ment (grade equivalent)	Between	4	1166.76	291.69	1.24	
	Within	89	20912.55	234.97		.311

APPENDIX F

Comparison of the Three Groups of Potential Dropouts
by School, Grade, and Age

Table 15

Comparison of Potential Dropouts by School
Associated Variables

Variable	School	N	Mean	S.D.
Extracurricular activities	G.R.H.S.	25	.48	.77
	G.C.	22	.77	.75
Days absent (1981-82)	G.R.H.S.	25	28.08	12.72
	G.C.	22	17.18	8.28
Grades failed	G.R.H.S.	25	.48	.71
	G.C.	22	.68	.72
English grade point average	G.R.H.S.	25	53.92	6.68
	G.C.	22	44.45	13.55
Mathematics grade point average	G.R.H.S.	25	49.92	18.94
	G.C.	22	51.64	15.15
Science grade point average	G.R.H.S.	25	51.96	16.93
	G.C.	22	44.23	16.64
Reading achievement (grade equivalent)	G.R.H.S.	21	6.5	12.18
	G.C.	20	6.6	9.35

Note: G.R.H.S. = Glovertown Regional High School
G.C. = Gander Collegiate

Table 16

Analysis of Variance for Potential Dropouts by School

Variable	Source	d.f.	Sum of Squares	Mean Square	F	P
Extracurricular activities	Between	1	1.0	1.0	1.73	.20
	Within	45	26.1	.58		
Days absent (1981-82)	Between	1	1389.87	1389.87	11.77	.13
	Within	45	5327.11	118.22		
Grades failed	Between	1	.48	.48	.93	.34
	Within	45	23.01	.51		
English grade point average	Between	1	1048.45	1048.45	9.58	.00
	Within	45	4925.30	109.45		
Mathematics grade point average	Between	1	34.47	34.47	.12	.74
	Within	45	13430.93	298.47		
Science grade point average	Between	1	699.73	699.73	2.48	.12
	Within	45	12698.82	282.20		
Reading achievement (grade equivalent)	Between	2	.72	.36	.003	.93
	Within	39	4864.81	124.74		

Table 17.

Comparison of Potential Dropouts by Grade

Variables	Grade	N	Mean	S.D.
Extracurricular activities	9	22	.50	.77
	10	25	.77	.75
Days absent (1981-82)	9	22	20.27	10.57
	10	25	25.36	13.02
Grades failed	9	22	.59	.67
	10	25	.56	.77
English grade point average	9	22	45.92	8.69
	10	25	54.36	11.40
Mathematics grade point average	9	22	48.14	11.32
	10	25	53.00	20.92
Science grade point average	9	22	42.82	13.82
	10	25	53.20	18.40
Reading achievement (grade equivalent)	9	22	6.3	10.86
	10	25	6.8	10.22

Table 18

Analysis of Variance for Potential Dropouts by Grade

Variable	Source	d.f.	Sum of Squares	Mean Square	F	p
Extracurricular activities	Between	1	.57	.57	.96	.20
	Within	45	26.54	.59		
Days absent (1981-82)	Between	1	302.86	302.86	2.13	.15
	Within	45	6414.12	142.54		
Grades failed	Between	1	.01	.01	.02	.88
	Within	45	23.48	.52		
English grade point average	Between	1	267.03	267.03	2.54	.11
	Within	45	4706.72	104.59		
Mathematics grade point average	Between	1	276.81	276.81	.94	.34
	Within	45	13188.59	293.08		
Science grade point average	Between	1	1261.28	1261.28	4.68	.04
	Within	45	12137.27	269.72		
Reading achievement (grade equivalent)	Between	2	319.62	159.81	1.28	.28
	Within	39	4865.52	124.75		

Table 19

Comparison of Potential Dropouts by Age

Variable	Age	N	Mean	S.D.
Extracurricular activities	14	8	.50	.76
	15	14	.85	1.03
	16+	25	.70	.40
Days absent (1981-82)	14	8	17.75	10.32
	15	14	21.21	9.21
	16+	25	23.59	8.81
Grades failed	14	8	.00	.00
	15	14	.43	.51
	16+	25	1.21	.64
English grade point average	14	8	47.00	7.33
	15	14	47.92	14.50
	16+	25	50.32	10.38
Mathematics grade point average	14	8	47.13	14.40
	15	14	45.79	15.02
	16+	25	54.38	14.66
Science grade point average	14	8	37.13	17.39
	15	14	49.57	20.43
	16+	25	52.70	10.48
Reading achievement (grade equivalent)	14	7	7.1	9.71
	15	11	6.3	8.76
	16+	23	6.4	6.20

Table 20

Analysis of Variance for Potential Dropouts by Age

Variable	Source	d.f.	Sum of Squares	Mean Square	F	p
Extracurricular activities	Between	4	2.09	.52	.88	.49
	Within	42	25.01	.60		
Days absent (1981-82)	Between	4	784.63	196.16	1.39	.25
	Within	42	5932.35	141.25		
Grades failed	Between	4	8.31	2.08	5.74	.00
	Within	42	15.18	.36		
English grade point average	Between	4	437.73	109.43	.83	.51
	Within	42	5536.02	131.81		
Mathematics grade point average	Between	4	1011.68	252.92	.85	.45
	Within	42	12453.72	296.52		
Science grade point average	Between	4	1338.95	334.74	1.17	.34
	Within	42	12059.60	278.13		
Reading achievement (grade equivalent)	Between	4	358.20	89.55	.22	.89
	Within	36	14879.52	413.32		

